



CURRENT AFFAIRS FOR UPSC

5th to 11th February 2023



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INTERNATIONAL

STATE OF AFFAIRS

In his second State of the Union address, U.S. President Joe Biden tried to articulate several messages under one big theme — his administration was committed to rebuilding America’s economy while standing up to its challenges abroad. Much of the 72-minute speech was on the domestic agenda, particularly his economic optimism. The speech saw self-appreciation, ideas and rhetoric — he took pride in his economic policies, emphasising the low unemployment rate and easing inflation, repeated the calls for taxing the super-rich and bringing down prices of essential drugs, promised not to cut Social Security and Medicare and declared that democracies have become stronger and autocracies weaker. While there was no major policy shift, the 80-year-old President repeated the phrase “finish the job”, indicating that he needed more time to build on what he has already done — seen as a pitch for his re-election campaign. Mr. Biden also referred to Russia and China as key foreign policy challenges — the Ukraine invasion as “a test for America”, and that America “will act to protect our country” if its sovereignty is threatened, an indirect reference to the balloon incident.

If Mr. Biden used the speech to defend his legacy and lay his vision, it also laid bare his administration’s critical challenges. To be sure, the unemployment rate fell to the lowest level since 1969 — to 3.4% in January 2023 — and inflation continued to ease in the month. Still, most Americans (58% as in a recent survey), burdened by high energy prices and slow growth in wages, remain unhappy with his handling of the economy. The President may have plans for re-election, but only 37% Democrats back him. Mr. Biden will also face growing resistance to his policies from Congress in a Republican-controlled House. On foreign policy, the U.S. has so far stood resolutely behind Ukraine, but, as the war grinds on, there are rising questions about a possible endgame. A bigger challenge for Mr. Biden is how to handle ties with China at a time when the two superpowers compete for global influence. The balloon incident suggests that it is not an easy task. Half of Mr. Biden’s first term is over. As the election season is heating up, time is running short and his task is cut out — he has to act more decisively on the economic front if he wants to build a fair order of competition and opportunities, work towards ending the war in Ukraine without compromising on America’s standing in Europe, and put in place stronger guardrails in U.S.-China relations to check an escalation in tensions and deterioration in ties.

THE SAGA OF A ‘SPY’ BALLOON IN U.S. AIRSPACE

The story so far:

Last week, the U.S. shot down a Chinese ‘spy’ balloon, days after the surveillance device was first spotted over American airspace, bringing the dramatic saga to a climax and dealing yet another blow to the already strained diplomatic relation between the two sides.

What happened?

Reports of a massive white orb, believed to be the size of three school buses, floating high above the U.S. State of Montana captured global attention earlier this month. Ending speculations, American defence and military officials confirmed that the reconnaissance balloon had travelled from China, entered the air defence zone north of the Aleutian Islands on January 28, subsequently moved over land across Alaska and into Canadian airspace and crossed back into the U.S. over



Idaho. President Joe Biden was briefed on the matter and the military considered shooting down the balloon which Pentagon believed was a Chinese surveillance tool carrying sensors and equipment to collect information about military and other strategic sites like Montana, which is home to one of the nation's three nuclear missile silo fields. Though the Pentagon acknowledged that the balloon was unarmed, it decided against aerial action at the time due to risks for those on the ground owing to its massive size and altitude. As a precautionary measure, the U.S. Federal Aviation Administration paused aerial activity at three airports. As the news of the 'spy' balloon traversing American skies caused a sensation, the Chinese Foreign Ministry acknowledged that the balloon was from China after initial reluctance, but rejected claims of spying. It insisted that the balloon was an errant civilian airship used mainly for meteorological research that went off course due to winds. "The Chinese side regrets the unintended entry of the airship into US airspace due to force majeure. The Chinese side will continue communicating with the US side and properly handle this unexpected situation caused by force majeure," the statement said. Beijing also expressed "regret" over the incident and insisted that it respects the sovereignty of other countries.

How was the balloon shot down?

Long before the shoot down, U.S. officials took steps to protect against the balloon's collection of sensitive information, mitigating its intelligence value to the Chinese. Ahead of the mission, NASA assessed the debris field based on the trajectory of the balloon, weather and estimated payload of sensors. Multiple fighters and refuelling aircraft, including F-15s and tanker aircraft, were part of the mission. But it was an F-22 Raptor fighter jet that took off from an air force base in Virginia that took down the balloon by firing a short-range AIM-9X Sidewinder missile. As per reports, debris was strewn across 11 km, with most landing in shallow water. After the mission was complete, the U.S. informed China of its action. The downing of the balloon by a missile drew a strong reaction from China which insisted that the flyover was an accident and criticised U.S. for an "obvious overreaction". The shoot down of the balloon has "seriously impacted and damaged" relations between the two countries, the Chinese Foreign Ministry said.

What are spy balloons?

Spy balloons are high-altitude surveillance tools that usually operate at 80,000-1,20,000 feet — well above the cruising altitude of commercial aircraft — to gather intelligence and carry out other military missions. Typically, a spy balloon is equipped with cameras and imaging devices suspended beneath the gas-filled white object to capture things of interest. Unlike satellites, balloons are economically viable. Due to their proximity to the Earth's surface, they can widely scan an area from close quarters and capture clearer, high-resolution images of the target. The disadvantage is that these are not directly steered, but can be roughly guided by changing altitudes to catch different wind currents, as per a study by the Air Force's Airpower Research Institute. They are also a relatively easy target.

Taiwan has accused the Peoples Liberation Army (PLA) of using spy balloons in the past. A similar sighting was reported over Andaman and Nicobar Islands in January last year. There has, however, been no official confirmation or evidence that establishes its link with China.



LOCATING CHINA IN THE RUSSIA-UKRAINE WAR

The story so far:

As the Russia-Ukraine conflict marches toward the one-year mark, there seem to be hardly any signs of de-escalation. Western powers have started providing powerful offensive weapons to Ukraine, and Russia has threatened grave consequences in response. Moreover, as Western sanctions on Russia progressively tighten, the country is increasingly becoming reliant on China. While China has officially been speaking in a largely neutral language, there have been some instances which have come to light recently of China allegedly assisting Russia in its campaign.

What is China's stance on the conflict?

China's formal stance on the conflict has been on the lines of "all countries deserve respect for their sovereignty and territorial integrity" and that "support should be given to all efforts that are conducive to peacefully resolving the crisis", which it has consistently been reiterating on the world stage. With an emphasis on "all countries", China appears to be demonstrating its position as being equidistant from both the conflicting parties. However, despite this articulation, China's attitude towards the conflict has often been categorised as a 'pro-Russian neutrality'.

Russia and China are engaged in a "comprehensive strategic partnership of coordination for a new era"; and despite the conflict, China has pushed ahead with strengthening its relations with Russia. Moreover, China has painted the U.S. and NATO as prime instigators of the crisis, echoing the Russian narrative in this regard. It also needs to be noted that in the past one year since the start of the conflict, out of the seven resolutions put to vote in total at the UN General Assembly, Security Council, Human Rights Council and the World Health Organization by the West against Russia, China voted against three and abstained from four. In fact, China had only voted in favour of one UN Security Council resolution — the proposal which was raised by Russia on humanitarian aid. Hence, China's portrayal of a neutral stance has many detractors.

However, as the conflict progressed, China's rhetoric seems to be becoming less pro-Russia and more neutral in tone. The signaling from China's top leadership seems to suggest this. Xi Jinping, the President of China, during his November 2022 meeting with German Chancellor Olaf Scholz, warned that the conflict should not cross the nuclear threshold; perhaps referring to Russia's President Vladimir Putin's nuclear threats to deter Western support to Ukraine. Also, China's incoming Foreign Minister Qin Gang had mentioned in his article in The Washington Post in March 2022 that "Had China known about the imminent crisis, we would have tried our best to prevent it". Subsequently, in his piece in The National Interest in December 2022, he struck a sympathetic note with the Ukrainians. He had also at other instances emphasised that there are some limits in China's relations with Russia despite the talks of a "no limits" partnership.

Apart from the higher level leadership in China, there have also been some alleged noises from below the hierarchy which have been critical of Putin's actions. Nevertheless, the new trend in China's attitude to the conflict was once again on display during the G-20 summit held at Bali in November 2022. The leaders' declaration which stated that most members strongly condemned the war, was not concurred with by China only because of its objection to calling the conflict a 'war'. However, China not opposing the condemnation of the conflict itself, rather than its terminological nuance, is something which has not missed international scrutiny.



How much is China involved in the conflict?

Outside the realm of discourse, China's actions do not seem to carry any such nuances, as it is intervening at least in an indirect manner in the conflict. China has benefited immensely from buying cheap Russian oil and gas. Since the start of the conflict, China has displaced Germany as the largest purchaser of Russian oil, with Russia replacing Saudi Arabia as China's largest supplier of crude oil. The growing collusion between the two countries is not just limited to hydrocarbons, but also extends to materials and technology.

Recently, The Wall Street Journal has exposed China's covert assistance to Russia by accessing Russian customs data compiled by C4ADS, an American think tank. The findings suggest that Chinese State Owned enterprises in the defence sector have provided navigation equipment, jamming technology, radar systems and fighter-jet parts to their Russian counterparts. According to the data, several tens of thousands of shipments of dual use goods have been sent by China to Russia, to which the latter would otherwise be having only restricted access due to sanctions. It has also been found that millions of chips have made its way to Russia through China; chips being central to modern military equipments and also subject to increasing sanctions by the West — both against Russia and China.

China refuted such allegations and claimed that the military dimensions of such transactions were mere speculations. This is in sharp contrast to China's rhetoric where it demands Western powers not to send military support to intensify the conflict. These actions by China have a huge significance with respect to recent developments, wherein countries like Germany and the U.S. are sending their offensive weapon platforms to Ukraine such as the Leopard and Abrams tanks, respectively. The West is starting to take actions against China in this milieu. For instance, the U.S. has recently slapped sanctions on Spacety China, a Chinese satellite company which was indirectly providing satellite imagery of Ukraine to the Wagner Group, a Russian private military force which is now heavily involved in the conflict.

What is the rationale behind China's emerging attitude?

While there is a strengthening of neutrality in China's rhetoric, the same is absent in its actions. This trend and dichotomy can only be explained by understanding China's larger gameplan. China needs to keep Russia close and well-supplied because Russia is its premier ally in its larger global ambition to undermine U.S. dominance. China would also like to keep its Russia card so that in the eventuality of the conflict turning into peace talks, China could use it to gain concessions from the West. Perhaps, the ideal bargain which China seeks is on the trade and technology front where it is facing major challenge from the West of late. This is significant for China, especially at a time when it desperately needs a post-Zero COVID economic revitalisation.

China cannot overtly support Russia as it will hurt its relations with both Ukraine and the European Union (EU). China is the largest trading partner for both Russia and Ukraine; in fact, China displaced Russia in 2019 as Ukraine's largest trading partner. Ukraine, and not the U.S., is China's largest corn supplier and its third largest supplier of military equipment; China is Ukraine's biggest market for defence goods. Liaoning, China's first aircraft carrier, is basically a refurbished aircraft carrier bought from Ukraine after the Soviet Union's disintegration. China, therefore cannot abandon all its interests in Ukraine for Russia's sake. China also has very strong economic ties with the EU, and would like the EU to further bolster its strategic autonomy to act more independently of the U.S. in matters of geopolitics.



On the whole, China's efforts at the end to encourage Russia in a limited and covert manner, without raising alarms in the West seems to be intended to keep the war going. For one, it provides valuable time and information for planning a Taiwan invasion. China maybe watching and learning from Western assistance to Ukraine to forecast their response to a possible invasion of Taiwan in the future by China, as mentioned by the CIA Director William Burns in July 2022. It is certainly in China's best interest to keep Russia and the West divided, lest they team up together against China as in the 19th century. Moreover, with the conflict prolonging, the West will be distracted from the Indo-Pacific theatre, and Russia will be left weakened to pose any threat to China's growing influence in the post-Soviet space. At the same time, China can fill the economic void in Russia left by the withdrawal of Western investment and technology, while engineering an economic recovery for itself.

China can also build up its strategic reserves and capabilities during the crisis to prepare for an inevitable hostile period of relations with the U.S. in a post-Ukraine scenario.

IS THERE A CHANGE IN GERMAN POLICY TOWARDS RUSSIA?

The story so far:

After months of political debate, the German government announced on January 25 that it would send Leopard 2 main battle tanks (MBTs) to Ukraine. The decision marks Germany's shift from its policy of Ostpolitik — an approach followed in an effort to bridge Berlin's divisions and “bring change through trade”.

How did Germany's policy towards Russia evolve in the 20th century?

Germany's relationship with Russia has always been critical to European security and prosperity. Soon after the Bolshevik revolution and Germany's defeat in the First World War, the Soviet Union and the newly born German republic signed the Treaty of Rapallo, establishing diplomatic relations. In August 1939, as war clouds were hovering around Europe, Nazi Germany and the Soviet Union signed a non-aggression agreement, which eventually collapsed in 1941 when Hitler invaded the latter. After the Second World War, Germany was divided between the Soviet backed East Germany and the U.S.-backed West Germany. Gradually in 1971, with the adoption of 'Ostpolitik' by West German Chancellor Willy Brandt, significant economic interaction began between the two sides. As a result of this policy, Germany signed an agreement and started importing Russian natural gas for the first time. It was a widely shared belief that economic interdependence could foster better political ties.

What about post-Cold War period?

In the post-Soviet world, a unified Germany doubled down on its efforts to promote ties with Russia. The efforts to promote political ties through energy trade continued even as Vladimir Putin and Gerhard Schroder rose to leadership in Russia and Germany, respectively. The Nord Stream 1 pipeline, transporting gas directly from Russia to Germany, was a result of these changing equations. The energy relationship went hand-in-hand with the political relationship. Regardless of Russia's actions in Georgia (2008) and Crimea (2014), the German political establishment continued enhancing Germany's energy reliance on Russia.



How has the war in Ukraine impacted Germany's foreign policy?

As Russia invaded Ukraine on February 24, 2022, Germany's policy underwent a fundamental shift. Chancellor Scholz declared the war a *Zeitenwende* (turning point), and since then, Germany's policy has moved away from an emphasis on dialogue and diplomacy to a more assertive stance, culminating in the decision to send Leopard 2 MBTs to Ukraine. In the initial phases of the war, Berlin believed that a diplomatic solution was possible to bring an end to the conflict. However, as the war progressed, Germany amended several of its previous policies that shaped its orientation towards Russia.

What has been Germany's response since the war?

One of the key factors driving this change in policy is Germany's recognition of the need to reduce its dependence on Russian energy. Soon after Mr. Putin recognised Ukraine's Donetsk and Luhansk provinces as independent republics, Germany stalled the Nord Stream 2 pipeline, which was ready for operation. Subsequently, it announced the construction of four floating terminals and two permanent onshore sites for enhanced LNG imports, struck an energy deal with Qatar, and supported numerous rounds of EU sanctions against Russian entities. Germany also worked with other European capitals to assure swift delivery of arms and aid to Ukraine. Germany's gradual shift towards a more robust policy towards Russia is a testament to the changing realities of Europe's security landscape.

US BOMBED NORD STREAM GAS PIPELINES, SAYS TOP INVESTIGATIVE JOURNALIST. WHAT HAPPENED UNDER THE BALTIC SEA LAST YEAR?

A veteran American investigative journalist has claimed that the September 2022 bombing of the undersea Nord Stream gas pipelines was carried out by the Central Intelligence Agency (CIA) in a covert operation at the direction of the White House. President Joe Biden's administration has denied the allegations and called the report "utterly false and complete fiction".

Seymour Hersh, a Pulitzer Prize-winning journalist who has previously worked with The New York Times and The New Yorker magazine, published the findings of his investigation on Substack. The report claimed that US Navy divers, operating under cover of a mid-summer 2022 NATO exercise, planted remotely triggered bombs to destroy three of the four Nord Stream pipelines.

Last September, a series of leaks were reported in the Nord Stream and Nord Stream 2 pipelines, multi-billion dollar projects to carry natural gas from Russia to Germany through the Baltic Sea. After an examination, both Sweden and Denmark, in whose jurisdiction the leaks happened, said the leaks took place because someone deliberately bombed the pipelines. However, they did not reveal who was responsible for the attack.

Ever since it became operational in 2011, Nord Stream, the first of the two pipelines, had been one of the major sources of energy supplies for not just Germany but also other countries in Europe. Once the Russia-Ukraine war broke out, it became the centre of tensions as Russia sought to use the pipeline to negotiate its interests by restricting supplies.

With Ukraine and the US asking European countries to reduce their dependence on Russian energy, this led to a difficult and uncertain economic outlook for the continent with the cost of living and energy shooting up dramatically. With Germany having decided to halt the Nord Stream 2 project two days before the Russian invasion of Ukraine, and following the bombing of the pipelines, virtually no gas from Russia to Europe now flows through this route.



With the energy supply from Russia at all-time low, European countries had been importing liquified natural gas, or LNG, from the US on a much bigger scale. LNG though is significantly more expensive than piped natural gas from Russia.

Apart from the US, Azerbaijan has also become a major supplier to these countries. Last year, the gas supply from Azerbaijan to the EU reached 12 billion cubic metres.

THE STATE OF ETHNIC DEMOCRACY IN MALAYSIA

Malaysia held its 15th general election (GE) in November 2022 to put an end to the volatile political situation in the region — the fallout of two ruling coalitions in quick succession. Given the tectonic political landscape of Malaysia, the election delivered, unsurprisingly, the first hung Parliament of the country as none of the existing political coalitions secured a simple majority of 112 seats out of a total 222 seats in the Dewan Rakyat (lower house of Malaysian Parliament).

The unity government led by Pakatan Harapan (PH), (The Alliance of Hope) under the premiership of Mr. Anwar Ibrahim formed the government even though it fell short of a majority with its 82 seats. It could do so as it was backed by the former long-ruling coalition Barisan Nasional (BN) (National Front) led by the United Malays National Organisation (UMNO) and regional parties like Gabungan Rakyat Sabah (GRS) and Gabungan Parti Sarawak (GPS) from the two states of Sabah and Sarawak of East Malaysia. The PH coalition is in power for the second time after its stint in 2018, and it advocates for a multi-cultural, inclusive, democratic, and modern Malaysia. As the PH coalition rises to power, Malaysian observers are asking the following questions — is transformative politics in the offing, can the PH coalition usher in democratic reforms and will ethnic democracy wither away in Malaysia?

Malaysia's melting pot

Malaysia is a multi-ethnic, multi-racial, and multicultural country, comprising of an ethnic Malay majority, a plethora of indigenous communities, and ethnic minorities like the Chinese and the Indians. Malaysia adopted a consociational (a political system formed by the cooperation of different social groups on the basis of shared power) democracy, at the time of independence in 1957, as a viable governance model to manage its ethnic heterogeneous population effectively.

The ethnicity-based political system facilitated the formation of a multi-ethnic coalition, popularly known as the Alliance, to come to power. The Alliance was composed of the UMNO representing the Malay majority and minority ethnic political partners — the Malaysian Chinese Association (MCA) and the Malaysian Indian Congress (MIC).

Consociational democracy was a successful political model from independence up until 1969. But after the unprecedented racial riot in 1969, the Alliance re-christened itself as the Barisan Nasional (BN) or the National Front, and embarked upon a model of politics to promote only Malay rights. This was unleashed by the UMNO which had a hegemonic political position in the ruling BN coalition which was in power for over six decades since independence until its replacement in the year 2018 by the Opposition forces led by the PH coalition. The UMNO assumed political legitimacy from its dominant position in the coalition and practised majoritarian politics. It used the Malaysian state as an apparatus to institutionalise Malay dominance, Malay language, Islam, and Malay culture in the public sphere. This hegemony was further accentuated through policy interventions.



The UMNO's plan was to implement pro-Bumiputera (favouring Malay populations) policies in education, employment, and civil services heralding in Malay ethnocracy in Malaysia. Special provisions have been enshrined in the constitution to establish 'Malay hegemony' such as making Malay language the official language, Islam the religion of the Federation and reserving lands for Malay populations. With its pro-Malay measures, there has been a bulging of the Malay middle class and the nascent Malay capitalist class. Thus, the UMNO gradually crafted a dominant political narrative — Malaysia for the Malays.

The legitimisation of such an ethnic democracy was feasible in Malaysia because of the numerically lower immigrant and ethnic minorities, namely the Chinese and the Indians.

The consequences of an ethnic model

However, by pursuing pro-Malay public policies, the UMNO-led ruling BN coalition has severely damaged the social fabric of Malaysia. The ethnic minorities face relative economic deprivation because of skewed socio-economic policies favouring the Malay majority. The unveiling of a 'cumulative marginalisation' facilitated the escalation of an ethnic uprising in Malaysia. The Malaysian Indian community organised a massive street protest, 'the Indian spring' in 2007 led by the Hindu Rights Action Force (HINDRAF) which highlighted the socio-economic and cultural predicaments of the Indian community under the grip of ethnic democracy. The fuelling of race and religious identity-based politics by the UMNO led to the erosion of social harmony which in turn led to the spike of ethnic conflicts between the Malays and the Indians as evidenced by incidents such as the Kampung Rawa in 1998, and the Kampung Medan in 2001.

The cultural politics of the UMNO has resulted in the rise of political Islam, sectarianism, communalism, racism, xenophobia, polarisation, cultural insularity, and puritanism. Moreover, due to blatant political patronage, crony capitalism, and nepotism, the Malaysian economy has been reeling under the 'middle-income trap' for several decades. The ethnic model of UMNO politics propelled a glaring economic inequality across races and the rural-urban divide. It has led to political corruption and fed the rise of kleptocratic political figures like Najib Razak — the ex-UMNO President and the sixth Prime Minister of Malaysia who was convicted for his involvement in the 1Malaysia Development Berhad (1MDB) scandal.

An alternative

To counter the ethnic model of the UMNO, counter political narratives have emerged — 'Malaysia for all Malaysians' by multi-racial political parties like the Democratic Action Party (DAP) and the Parti Keadilan Rakyat (PKR). These parties are not homogenous and are afflicted with ideological ambiguities. For example, the DAP advocates for an egalitarian, secular Malaysia regardless of race and religion. The PKR, however, supports the special position of Malays, Islam as the state religion, preservation of Malay culture, and the promotion of Malay rights despite its progressive ideals and support for building a democratic, inclusive Malaysia for all Malaysians.

This ambiguity is represented quite clearly through Anwar Ibrahim, the tenth Prime Minister of Malaysia, the champion of inclusive and democratic Malaysia who heads the PH coalition. He has made it quite clear in his first statement that Malaysia is a multi-racial country with a special position for Malays, Islam, the Malay language, and Malay rights.

Given his liberal and democratic credentials, one can expect that the politics of 'dominance without Malay hegemony' may prevail under his regime instead of the politics of 'Malay dominance with hegemony' as in the case of the former long-ruling BN coalition led by the UMNO.



As alternative politics is mired in contradictions, it is not a panacea for the ethnic model politics followed by the UMNO. Furthermore, the PH is facing a downward trend, despite the inclusion of newly enfranchised youth.

PAKISTAN ECONOMY CRUMBLES: FOREX FALLS, INFLATION SOARS

Pakistan's economy is on the brink of collapse. The country has asked the International Monetary Fund for a bailout from an impending default. Pakistan is in its 13th bailout from the IMF since the late 1980s. It is grappling with widespread blackouts, runaway inflation, depreciating currency and plummeting foreign exchange reserves. Its economic troubles have worsened following the devastating floods last year. In January 2023, retail inflation soared to a 48-year-high of 27.6%. Urban food inflation was at 39% while rural food inflation spiralled to 45.2%. Both urban and rural food inflation have remained in double digits for over 10 months now.

Rising inflationary pressure has pushed up the prices of essential commodities like wheat, onions, milk and egg. The average cost of a 20kg wheat flour bag in January 2022 was Pakistani Rupee (PKR) 1,164.8. This shot up to PKR 1,736.5 in January 2023, a 50% rise. Similarly, the price of one kg of onions quintupled from PKR 39.4 to PKR 231 in a span of one year.

Meanwhile, news reports suggest that thousands of containers with essential food items, raw materials and medical equipment are held up at ports due to a shortage of dollars. Foreign exchange reserves with the State Bank of Pakistan dipped to \$3.08 billion in the week ending January 27, 2023. Forex reserves in Pakistan have dwindled to a nine-year low and are just enough to cover three weeks of import.

Depreciating currency and dwindling forex reserves are bound to make imports costly, which is worrying for Pakistan since it is highly reliant on imports. While the country's imports have seen a significant rise, exports have remained largely stagnant, widening the trade deficit in the recent years. According to a working paper by the Asian Development Bank, Pakistan did not produce machinery crucial for manufacturing and infrastructure development, which made them import reliant. Pakistan's exports mainly comprise textiles and agriculture-related goods and lack technological sophistication. However, in the past few months, imports, too, have reduced due to a shortage of dollars.

Pakistan's expenses are also rising while revenues have failed to keep pace. Interest payments comprise a huge chunk of expenses leaving little room for development-related expenditure. At the same time, Pakistan has also not been able to mobilise tax revenues due to a narrow tax base and concessions. In FY22, total revenues as a share of GDP decreased to 12% while total expenditure as a share of GDP neared 20%.

Due to high levels of borrowing, total debt and liabilities reached PKR 59,697.7 billion (89% of the GDP) in FY22. Total debt has consistently risen over the years and peaked at 93.8% in FY20. Of the total outstanding bilateral debt owed by Pakistan as of March 2022, China accounts for about 35%. Moreover, a sector-wise share of foreign private debt shows that as much as 92% was used for the power sector.

PAKISTAN BLOCKS WIKIPEDIA: REPORT

Pakistan has blocked Wikipedia after the website refused to remove offensive or blasphemous material, according to a media report on Saturday.



The blacklisting of Wikipedia comes days after the Pakistan Telecom Authority (PTA) degraded Wikipedia services for 48 hours, threatening to block it if the content deemed 'blasphemous' was not deleted, The News newspaper reported.

When a PTA spokesperson was contacted late on Friday night and inquired about the blocking of Wikipedia, the official confirmed that "yes" it had been blocked, it reported.

On the instruction of the high court, the PTA degraded — disrupting and slowing access to the encyclopedia — website for 48 hours because there was blasphemous content on it.

Wikipedia is a free online encyclopedia, created and edited by volunteers around the world and hosted by the Wikimedia Foundation.

The PTA spokesperson stated that Wikipedia was approached for blocking/removal of the said content by issuing a notice.

An opportunity for a hearing was also provided; however, the platform neither complied by removing the blasphemous content nor appeared before the authority.

Given the intentional failure on part of the platform to comply with the directions of PTA, the services of Wikipedia were degraded for 48 hours with the direction to block/remove the reported contents.

The restoration of Wikipedia's services will be reconsidered if the reported unlawful content is blocked/removed, the spokesman said.

Social media giants Facebook and YouTube have been blocked in the past over content deemed blasphemous.

Blasphemy is a sensitive issue in Muslim-majority Pakistan.

DreamIAS



NATION

A QUICK RESET

As India ramps up its international outreach in the year of its G-20 presidency, better ties with Canada are clearly on the agenda for the government, with the External Affairs Minister, S Jaishankar, hosting Canadian Foreign Minister Melanie Joly for bilateral talks in New Delhi. This visit of Ms. Joly, who will be in Delhi again for the G-20 Foreign Minister's Meeting in March, and later again to accompany Canadian Prime Minister Justin Trudeau for the G-20 summit, will be followed by several other Ministers for other G-20 meetings. Another reason for the acceleration in relations is Canada's deteriorating ties with China. In November, Canada announced its new Indo-Pacific Strategy that marked out China as an "increasingly disruptive global power", while referring to India as a "critical partner" with shared traditions of democracy and pluralism. In addition, Canada's search for new markets to diversify its considerable economic engagement with China coincides with India's push to conclude free trade agreements with many countries. While officials have been working to announce an "Early Progress Trade Agreement" this year, they are also hopeful of securing a Comprehensive Economic Partnership Agreement soon. The flurry in bilateral activity is in contrast to past developments, especially after Mr. Trudeau's disastrous India visit in 2018, and his criticism of the Modi government's handling of the farmers' agitation in 2020-21 that led to the cancellation of diplomatic activity. The ties began to be reset after he met Mr. Modi on the sidelines of the G-7 summit in Germany last year.

Several issues remain to be sorted out — New Delhi has continued to express concerns over the resurgence of Khalistani separatism and calls for a "referendum" amid the Sikh community in Canada as well as incidents of vandalism and violence targeting the Indian community there. In addition, Canadian pronouncements on developments in India, including on rights and freedoms can always set off diplomatic landmines. This has been a running thread in bilateral ties, which have seen many ups and downs over the past decades, despite a massive Indian diaspora population and student links. Canada was among the first countries associated with India's nuclear programme, but the relationship ruptured after India's nuclear tests in 1974. When ties began to improve in the 1980s, it was Indian anger over Canadian shelter to separatist Khalistani groups behind the 1985 bombing of an Air India flight and the prolonged trial. Relations were restored in 2010, with the visit of Prime Minister Manmohan Singh to Canada, and an agreement on civil nuclear cooperation, and Mr. Modi in 2015. But they flagged after 2018. This year, timing and intent seem on course for a leap in ties which could bring strategic and economic gains, provided both sides also focus on side-stepping the possible political pitfalls along the way.

FIVE NEW APPOINTMENTS IN SC SIGNAL THAT COLLEGIUM HAS PREVAILED OVER UNION GOVT.

Chief Justice of India (CJI) D.Y. Chandrachud is scheduled to read out the oath of allegiance to the Constitution to five new judges of the Supreme Court (SC) on Monday. The occasion will see the largest number of top court judges taking oath simultaneously in nearly two years.

Monday's swearing-in is also a sign that the court has prevailed over the government's continuous attacks on the collegium system. The court has refused to let the disparaging public comments made by government functionaries about the collegium affect it. Instead, the court had used the opportunity to put pressure on the government through judicial orders and collegium resolutions



to clear pending appointments. The court has also used the acrimony initiated by the Centre to set down some ground rules for the government while making judicial appointments.

For one, the collegium has given a clear direction that seniority of the names recommended should be kept intact by the government. The Centre should not pick one or two of the names recommended in a batch and appoint them as judges while keeping the rest pending. The government has complied with the collegium's wishes in the case of the five names.

A collegium resolution of January 31 had specified that the new names should only be appointed after Justices Pankaj Mithal, Sanjay Karol, P.V. Sanjay Kumar, Ahsanuddin Amanullah and Manoj Misra, who were recommended on December 13 last year. "The names recommended by the Collegium by its resolution on December 13, 2022, shall have precedence over the two names recommended presently for appointment to the Supreme Court. The appointments of five judges recommended on December 13 should be notified separately and earlier in point of time before the two judges recommended by this resolution," the resolution said.

Second, the court has made subtle but effective changes in the collegium's functioning while making it clear that the collegium system is law as of now, and the government is welcome to bring a better one.

Detailed resolutions

Resolutions are no longer a short list of names recommended for judgeships. They have once again become detailed, publishing reasons and discussions undertaken about the candidates. In fact, the extent of the collegium's transparency has even made Law Minister Kiren Rijiju, an advocate of transparency within the collegium, react that some things should remain secret.

On January 18, the collegium let the public know about the government's objections concerning the sexuality of Saurabh Kirpal, an openly gay lawyer recommended for the Delhi High Court. "Every individual is entitled to maintain their own dignity and individuality, based on sexual orientation," the collegium had replied.

BENCH AND BIGOTRY

The questionable elevation of advocate L. Victoria Gowri as a judge of the Madras High Court epitomises the problematic nature of the system of judicial appointment. It also portends a government-driven project to take over the Bench through its favourites. Ms. Gowri, whose unabashed prejudice against minorities became evident when her past speeches and interviews came to light after her name was approved by the Supreme Court, was sworn in at an oath-taking ceremony organised with great dispatch. Earlier, the Union Law Ministry had processed the recommendation concerning a set of candidates with extraordinary speed not displayed in other cases. It was clear that the government wanted to act ahead of any possible interim order from the Court, which had agreed to hear petitions from a group of lawyers against her appointment. In the process, the government ignored a specific recommendation that R. John Sathyan, an advocate whose candidature was earlier opposed by the Ministry, be appointed first. It is a clear message that the present regime would pick and choose among those approved by the collegium, in a manner informed by its political preferences. That the government repeatedly has its way indicates that the conflict over the appointment process has reached a stage in which the collegium is constantly under pressure to yield to the executive's position on individuals if any meaningful progress is to be made on the perennial process of filling up vacancies.



The challenge to Ms. Gowri's appointment was on the ground that had there been effective consultation and relevant information placed before the collegium, her appointment may not have materialised. Further, by her speeches denouncing Christians and Muslims she had rendered herself ineligible to act without fear or favour; and that she could not be expected to dispense justice without discrimination "on the ground of religion...". However, the Bench rightly rejected the petitions, observing that it cannot revisit the suitability of any appointee after the collegium had decided on it. The Court on the judicial side could not possibly have gone into a choice made by its top three judges. Indeed, it made no sense to refer the collegium's decision to a Bench for review. It is apparent that the State government too had not flagged her extreme views. While political affiliation should not disqualify anyone from judicial office, open bigotry ought to. It is also a signal failure of the collegium process that a controversial proposal could get past its scrutiny. What is needed is more than reform in the appointment system: perhaps, a process that combines an objective evaluation of the candidates' credentials with an independent mechanism that ensures public scrutiny of their suitability. What is in place at present is an opaque, closed-door consensus-building that could leave room for unhealthy compromises.

DELHI HC: VIRGINITY TEST ON ACCUSED IS SEXIST AND UNCONSTITUTIONAL

Justice Swarana Kanta Sharma, in a significant judgment, said, "The virginity test conducted on a woman detainee, accused under investigation, or in custody, whether judicial or police, is declared unconstitutional and in violation of Article 21 of the Constitution". The ruling came on a 14-year-old petition filed by Sister Sephy, one of the two convicts in the Sister Abhaya murder case. Advocate Romy Chacko, representing Sister Sephy, contended that she was "forcefully subjected to undergo virginity test" by the Central Bureau of Investigation on November 25, 2008, against her consent. Mr. Chacko said the virginity test was conducted by the investigating agency under the pretext of an investigation to substantiate their case. "Most shockingly, in the present case the virginity test was used to determine the truth of the accusation of murder against the petitioner [Sister Sephy]," the High Court remarked.

On the issue of taking action against the officials of the CBI, the court said during that period guidelines of the top court or otherwise to have declared such tests to be unconstitutional were not present.

PETITION ALLEGING BID TO CHANGE ORIENTATION, SC STAYS HC ORDER FOR COUNSELLING OF GAY WOMAN

The Supreme Court on Monday stayed a Kerala High Court order directing a woman in a same-sex relationship to attend a counselling session, as it heard a plea by her partner alleging it was an attempt to change her sexual orientation.

A three-judge bench presided by CJI DY Chandrachud and comprising Justices P S Narasimha and J B Pardiwala also directed the woman be produced before a Family Court so that an SC official can ascertain if she was, as alleged by the petitioner, illegally confined to her home.

In her petition before the Supreme Court, the woman's same-sex partner, a 23-year-old fitness trainer, alleged the woman was being kept at home against her will by her parents who she said wanted to impede their marriage. She said "the detenu secretly communicated with the petitioner and has in clear words communicated that she is continuously harassed and tortured both physically and mentally".



The petitioner said she had first moved Kerala HC with a Habeas Corpus petition which asked the Secretary of the District Legal Service Authority, Kollam, to visit her partner's residence and ascertain the situation. In her statement to the Judicial Officer, the petitioner added, her partner admitted the two were in a romantic relationship but denied she was illegally detained by her parents.

The HC, the petitioner added, also directed her partner to "attend a counselling session with a psychologist attached to a counselling centre in Kollam district for the next four or five days". She said the counselling was an attempt to change her partner's sexual orientation and an act "proscribed" under law.

GIRL IN GURGAON: CASES OF ABUSE OF DOMESTIC WORKERS RAISE QUESTIONS ABOUT INFORMAL EMPLOYMENT SECTOR

On Tuesday, a Gurgaon-based couple was booked for allegedly assaulting and torturing a minor girl who worked for them as a domestic help. The girl has been admitted to a hospital for treatment of the injuries she suffered. While the police has said that an FIR has been registered under sections of the Indian Penal Code, the Juvenile Justice Act and Protection of Children from Sexual Offences Act, cases such as this one raise larger questions. These have to do with the nature and form of informal employment relationships in India and the unequal power equations between the employers and employees that underlie them. Domestic work in India serves as a major and growing employment avenue, especially for uneducated and unskilled workers from rural areas as well as the urban poor.

According to the government's e-Shram portal, a national database of unorganised workers, almost 10 per cent of the workers registered are engaged as domestic and household workers. Employment in this category tends to be dominated by women, with most of them being migrants. The work often involves long hours. And while wages in these occupations in urban areas, especially in the major metropolitan centres, may be higher than in rural areas, implementation of minimum wage rules remains an unaddressed issue across the country. Moreover, these workers have little bargaining power to correct this. Those employed in these jobs tend to have little access to social protection and are at times subject to harassment and abuse. Even when there is some sort of legal framework granting these workers some basic rights, low state capacity means that implementation on the ground remains poor. Over the years, there has been a growth in the number of private agencies who act as a conduit between the demand and supply ends of the market — the minor in this case, who hails from Jharkhand, is also reported to have been hired through a placement agency. While these agencies indicate some sort of push towards formalisation of this segment in the economy, their functioning remains mostly informal in nature. Most of them fail to provide any form of support, financial or otherwise, to these girls and women.

As urbanisation in India gathers momentum, as the nuclearisation of families rises, as the pressures on families of old-age care increase, demand for domestic care work is only likely to escalate. Considering the power dynamics at work, these employment spaces and frameworks cannot be left scantily regulated. While a degree of flexibility in work structures should be retained, there is a need to address the power imbalance, and provide greater protection. Ensuring detailed documentation and greater transparency in work contracts, along with stricter enforcement of rules and regulations, will be a necessary first step.



PORT BLAIR GANGRAPE: FORMER CHIEF SECY DESTROYED EVIDENCE, THERE WERE MORE VICTIMS, FINDS SIT

Establishing destruction of evidence by the key accused in the Port Blair gang rape case; corroborating statements of co-accused; specific electronic trails that buttress the victim's statement and evidence pointing to more than one victim – the Special Investigation Team of the Andaman & Nicobar Police has concluded it has sufficient evidence to prosecute former A&N Chief Secretary Jitendra Narain and three others on several charges including rape and criminal conspiracy. The complaint in the case was lodged by a 21-year-old resident of Port Blair who detailed, first before the A&N police and later to the SIT, how she was violently, sexually assaulted on two occasions by Narain. And how then Union Territory's Labour Commissioner R L Rishi was also involved in one encounter.

The Indian Express, which first reported the case and the possibility of more women being victimized in the sex-for-jobs scam in Port Blair, has learnt that the SIT has detailed the existence of more victims in its chargesheet filed in a Port Blair Court on February 3. Sources said the SIT has detailed how a protected witness in the case has testified about more women visiting the official residence of then Chief Secretary Jitendra Narain.

It is learnt that the chargesheet, running into over 900 pages, has revealed that both Jitendra Narain's co-accused, Rishi and hotel owner Sandeep Singh, have, in their disclosure statements, corroborated the precise sequence of events as furnished by the gangrape victim but have tried to cover up their roles. The three accused are in judicial custody in Port Blair.

ASSAM CRACKDOWN ON CHILD MARRIAGE: WHAT DOES THE LAW SAY?

Over the last few days, Assam has arrested over 2,000 men in a state-wide crackdown on child marriages. Those arrested have been booked under the provisions of the stringent POCSO Act and the Prohibition of Child Marriage Act.

Chief Minister Himanta Biswa Sarma said that the police will retrospectively book people who participated in child marriage in the last seven years and the focus will especially be on "mullahs, kazis, and pujaris" conducting these marriages. The arrests come in the backdrop of growing debate on the minimum age of marriage of Muslim women.

Under what law are the arrests being made?

Assam's Chief Minister has said that while men who married girls below 14 years of age would be booked under the Protection of Children From Sexual Offences Act, those marrying girls between 14 and 18 years would be booked under the Prohibition of Child Marriage Act.

The POCSO Act, of 2012 criminalises sex between a minor and an adult. The law does not recognize a minor's consent as valid. Sexual assault under POCSO is a non-bailable, cognisable offence. This means that the police can make an arrest without warrant. So a presumption of sexual assault is being made in case of child marriage involving minor girls below the age of 14. Sexual assault, that is not penetrative, carries a minimum imprisonment of three years that may extend to five years with a fine. Moreover, under Section 19, POCSO Act imposes a "mandatory reporting obligation" which requires every person who suspects or has knowledge of a sexual offence being committed against a child must report it to the police or the Special Juvenile Police Unit. Failure to do so will result in imprisonment, a fine, or both.



These mandatory reporting obligations also require doctors to report cases where minor girls seek medical assistance during pregnancies or for termination of pregnancies. Often doctors are forced to report sexual activity involving a minor girl, even if all parties involved have consented to the marriage.

The Prohibition of Child Marriage Act 2006, says that child marriages are illegal but not void. Instead, they are voidable at the option of the minor party, in the scenario that the minor petitions the court to declare the marriage void. The Act stipulates 18 years as the minimum marriageable age for women, while for men it is 21 years. The Act punishes child marriage with “rigorous imprisonment which may extend to two years or with fine which may extend to one lakh rupees or with both.” The punishment also extends to anyone who performs, conducts, directs, or abets any child marriage and includes rigorous imprisonment of up to two years and a fine which may extend to one lakh rupees unless proven that he had reasons to believe that the marriage was not a child marriage.

What is the debate on Muslim age of marriage?

Under Muslim personal laws, the marriage of a bride who has attained puberty is considered. Puberty is presumed, in the absence of evidence, on completion of the age of fifteen years. This gap between Muslim personal law and special legislations prohibiting child marriages or sexual activity of minors puts a shadow on criminality on such marriages.

What have the courts said on the issue?

The Supreme Court is currently examining this issue since different High Courts have ruled differently on it. On January 13, a bench led by CJI Chandrachud-led bench of the Supreme Court agreed to hear an appeal against a 2022 decision of the Punjab & Haryana High Court which allowed a 16-and-a-half-year-old Muslim girl to marry a person of her choice after attaining puberty. The National Commission for Protection of Child Rights (NCPCR) has filed the appeal.

NCPCR challenged the High Court’s ruling on grounds that personal laws can’t override special penal statutes. The National Commission for Women (NCW) also filed a petition in the Apex court in December 2022, where it sought directions to make the minimum marriageable age for Muslims at par with the other communities. The court had issued notice and appointed Senior Advocate Rajshekar Rao as amicus curie to assist in the matter. The SC’s intervention came after various High Courts ruled differently on this issue.

- The Punjab and Haryana High Court in a string of rulings has held that a Muslim girl can legally marry after attaining puberty. Often, the family of such girls file a case under POCSO alleging rape even when the minor girl has decided to marry or elope on her own volition.
- In October 2022, the Karnataka High Court quashed a POCSO case against a Muslim man who was arrested after a hospital made mandatory disclosures under the law when his pregnant wife, aged 17 years and two months visited a doctor.
- In November 2022, another bench of the Karnataka High Court, while noting the incongruity in law, granted bail to a Muslim man arrested under similar circumstances.
- However, in January 2013, the Karnataka High Court had ruled that the Prohibition of Child Marriage Act will have an overriding effect on the provisions of Muslim personal



laws where a girl can marry upon attaining puberty, as was the case of a 17-year-old girl in “Seema Begum vs State of Karnataka.”

What is the central government’s stand?

In 2021, the Central government sought to introduce the Prevention of Child Marriage (Amendment) Bill 2021, to raise the marriageable age for women across all religions, from 18 to 21 years. However, the Parliament panel examining this is yet to submit its report, after receiving an extension in October 2022.

In line with the Centre’s attempts, was the establishment of the Jaya Jaitly Committee in June 2020, by the Ministry of Women & Child Development, following which the committee submitted a report stating that the marriageable age for women should be increased from 18 to 21 years of age, in light of factors like reproductive health, education, etc. In December 2021, Smriti Irani, Union Minister for Women and Child Development said that the Prohibition of Child Marriage (Amendment) Bill, 2021, which seeks to raise the age of legal marriage for women from 18 to 21, will apply to all communities in the country and, once enacted, will supersede existing marriage and personal laws.

At the time of India’s independence, the minimum marriageable age stood at 15 years for females and 18 years for men. In 1978, the government increased it to 18 for girls and 21 for men. Years later, in 2008, the Law Commission came out with a report which stated that the minimum marriageable age for both men and women should be 18 years of age, as both are considered eligible to vote as citizens at the time.

WHY THE MCD HOUSE ELECTIONS HAVE BEEN STALLED FOR THE THIRD TIME

The election for Mayor in the MCD was stalled for the third time — after January 6 and 24 — on Monday (February 6). Two months after the AAP won a majority in the MCD House, Delhi remains without a Mayor or a Standing Committee, the effective decision-making arm of the civic body.

Satya Sharma, the Presiding Officer for the mayoral election in the Municipal Corporation of Delhi (MCD), said on Monday that aldermen — who are nominated members — are allowed to vote in the House and elect the Mayor, Deputy Mayor, and members of the Standing Committee. Sharma, a BJP councillor who was last month nominated as Presiding Officer by Lieutenant Governor Vinai Kumar Saxena, also proposed that voting for all three elections should be held simultaneously. While protesting the swearing-in of aldermen ahead of elected councillors, the Aam Aadmi Party (AAP) had expressed apprehension that this was being done to provide aldermen with voting rights, which they do not have under the Delhi Municipal Corporation Act, 1957. The election for Mayor in the MCD was stalled for the third time — after January 6 and 24 — on Monday (February 6). A full two months after the AAP won a majority in the MCD House, Delhi remains without a Mayor or a Standing Committee, which is the effective decision-making arm of the civic body.

Who are aldermen, and how are they selected?

Broadly, the term alderman refers to a member of a city council or municipal body; however, their specific roles and responsibilities differ according to the context.

Under the Delhi Municipal Corporation Act, the administrator can nominate 10 individuals over the age of 25 to the corporation. These aldermen are expected to have special knowledge or



experience in municipal administration and assist the House in taking decisions of public importance.

Last month, amid protests by the AAP, L-G Saxena appointed 10 aldermen to the MCD in his capacity as the administrator of Delhi. Four aldermen were sworn in on January 6, the day the newly-elected House was first convened. Another six were sworn in on January 23. All 10 are members of the BJP.

What does the law say about voting rights for nominated members?

Section 3(3)(b)(i) in Chapter II (Constitution of the Corporation) of the Delhi Municipal Corporation Act, 1957, says: "Ten persons, who are not less than 25 years of age and who have special knowledge or experience in municipal administration, to be nominated by the Administrator: Provided that the persons nominated under this sub-clause shall not have the right to vote in the meetings of the Corporation."

Presiding Officer Sharma claimed in the House on Monday that an amendment to the DMC Act notified in May 2022 gave aldermen the right to vote. This amendment reduced the number of wards in the MCD from 272 to 250 and replaced the word "government" in the Act with "Central government". But it did not make changes in the voting powers of nominated members.

Article 243R of the Constitution, which describes the "Composition of Municipalities", says that "The Legislature of a State may, by law, provide...for the representation in a Municipality of...persons having special knowledge or experience in Municipal administration...Provided that the persons...shall not have the right to vote in the meetings of the Municipality."

Does this mean aldermen have no voting rights at all?

Until 2015, aldermen had no voting rights in the House or Ward Committees (there is one from each of the 12 zones) of the MCD. On a challenge by alderman Onika Malhotra of the Congress, a single-judge Bench of Delhi High Court ruled that "the petitioners being constituent members of Ward Committees, can participate and vote in any meeting of the respective Wards Committee".

However, the judgment said, they "cannot file their nomination or offer their candidature for being elected as Chairperson of the Wards Committee. The petitioners may also offer their candidature for being elected as member of the Standing Committee. In the event any of the petitioners are elected as member of the Standing Committee, they may vote at any meeting of the Standing Committee and also offer their candidature for being elected as Deputy Chairperson of the Standing Committee; but, they cannot offer their candidature for being appointed as a Chairperson of the Standing Committee."

In 2016, a two-judge Bench upheld the order of the single judge.

Can elections for Mayor, Deputy Mayor, and Standing Committee be held simultaneously, as directed by the Presiding Officer? AAP leaders on Monday said there was no precedent for this. Deputy Chief Minister Manish Sisodia said the direction was illegal, and that the Mayoral election must be completed first. The notification appointing Sharma as the Presiding Officer had stated: "The newly constituted corporation will proceed to elect the Mayor as required by section 35 of the Act. The Mayor so elected will then resume the chair and will proceed to conduct the election of the Deputy Mayor and six members of the Standing Committee as required under Section 35(1) and 45(1) (i) of the Act respectively."



How is the MCD functioning without a Mayor or Standing Committee?

Following the 2022 amendment, the Centre can appoint a 'Special Officer' to "exercise the power and discharge the functions of the Corporation until the date on which the first meeting of the Corporation is held after the commencement of the Delhi Municipal Corporation (Amendment) Act, 2022".

The Mayor, Deputy Mayor and six Standing Committee members are usually elected in the first meeting itself. The remaining 12 members of the Standing Committee are elected in subsequent meetings called by the Mayor. The three adjournments over the past month have meant that only the councillors and aldermen have been sworn in so far. The work of the corporation is being handled by the executive wing, which comprises the Special Officer, the Commissioner and other officers.

CONSTITUTION DOESN'T ALLOW ALDERMEN RIGHT TO VOTE, SAYS SC

The Supreme Court on Wednesday said the Constitution does not allow nominated members of a municipality the right to vote in meetings, while issuing notice to the Lieutenant-Governor and the pro tem presiding officer of the Municipal Corporation of Delhi (MCD) in a petition filed by the Aam Aadmi Party (AAP) alleging deliberate stalling of mayoral elections for the third time in a row.

The three-judge Bench listed the case for detailed hearing on February 13.

AAP mayoral candidate Shelly Oberoi had moved the Supreme Court on January 27 pleading for swift and timely conduct of the mayoral polls after the House was stalled twice — January 6 and 24. She later withdrew the petition while seeking permission to move the court again in case the aldermen were allowed to vote. Soon after the House was adjourned on February 6, senior AAP leader Manish Sisodia had said that the party would seek the SC's intervention for impartial conduct of the mayoral elections.

Presiding officer

Senior advocate A.M. Singhvi, appearing for Ms. Oberoi on Wednesday, urged that the case concerned "destruction of democracy". He said Article 243U of the Constitution mandates that elections to constitute a municipality should be completed well in time.

Mr. Singhvi pointed out that the MCD elections were held on December 4, 2022, but subsequent polls for the offices of Mayor, Deputy Mayor and members of the Standing Committees have been stalled thrice. He said the pro tem presiding officer has allowed nominated members to vote in direct violation of Article 243R(2)(iv) of the Constitution. "It is not just a statute, the Constitution itself does not allow them to vote," Justice P.S. Narasimha remarked at the point. Mr. Singhvi argued that the pro tem presiding officer [BJP's Satya Sharma] is herself "illegal" as she is not the senior-most member. "Then she orders all three elections of the Mayor, Deputy Mayor and Members of the Standing Committees to be held together. There is directly a provision that this cannot be done," he submitted.

"Since in terms of Section 76 of the Delhi Municipal Corporation Act of 1957, the Mayor, or in his absence the Deputy Mayor, has to preside over every meeting of the corporation, the simultaneous holding elections of Mayor, Deputy Mayor and members of the Standing Committees is directly contrary to the provisions of the statute," the court recorded Mr. Singhvi's contention in its order.



DISABILITY ACTIVISTS FLAG MANMOHAN'S SHIFT TO RAJYA SABHA LAST ROW FOR WHEELCHAIR

WITH FORMER Prime Minister Manmohan Singh's designated seat in Rajya Sabha being shifted from the front row to the last row this session to allow wheelchair movement, disability rights activists are calling for greater political representation of persons with disabilities (PwDs) and creative solutions to make public buildings more accessible.

According to Congress sources, Singh's office asked the party to change his seat as it was difficult for him to walk to the front row. The party then arranged for him to be seated in the back row, near the aisle.

While it may be age-related mobility issues in the case of the former Prime Minister, disability rights activists have maintained that accessible and inclusive designs are not for PwDs alone. Anyone can experience temporary disability due to injury or illness, and public spaces should cater to that as well, they said.

Anjee Agarwal, a disability rights advocate and founder of NGO Samarthyam who was involved in the third-party accessibility audit of the Parliament building in 2011, said it was not enough to designate toilets for PwDs or construct ramps, but to ensure that they are user-friendly.

During the accessibility audit, Agarwal, a wheelchair-user, found that the toilets did not have enough space to turn the wheelchair, the flooring was slippery, and the door latch was at an inaccessible height.

"PwDs are not treated with respect and dignity, and given the back seat. But we don't have to accept this. The Constitution and the Rights of Persons with Disabilities Act, 2016, guarantee us non-discrimination," she said.

With the new Parliament building under construction, she said this was the time to "make sure that what happened to Dr Singh does not happen to anyone else". "It's not about a VVIP or a VIP. It's about being treated equally," she said.

Dr Satendra Singh, a professor at the University College of Medical Sciences, Delhi, and the founder of the Doctors with Disabilities group, said elected representatives had faced accessibility issues in the past, but were yet to raise their voices for PwDs.

"Our politicians with disabilities or those who acquire disability are failing us by not representing our voices. Rather than making Parliament and Assemblies accessible, they are happy to shift us to the last row. We need political representation of PwDs. We have exceptional professionals in medicine, sports, arts and all other fields in this category. Why are they not being nominated to Rajya Sabha," said Dr Singh.

Nidhi Madan, a landscape architect and proponent of inclusive design, said there were "creative solutions" available – like foldable seats, or leaving a seat vacant to make space for a wheelchair-user. This requires engagement with PwDs and those working on accessibility, she said.

"The demand is for equitable access. If you're shifting PwDs to the back row, then it's not equal," she said, adding that she hoped these issues would be addressed in the new Parliament building.



ARTICLE 105 OF CONSTITUTION: THE LIMITS TO FREE SPEECH IN PARLIAMENT, AND WHAT SUPREME COURT HAS RULED

Protesting against the expunction of parts of his speech on the motion of thanks on the President's Address, Leader of Opposition in Rajya Sabha and Congress president Mallikarjun Kharge has argued that MPs have freedom of speech, and that he did not make any personal allegations in the House.

In his letter to Rajya Sabha Chairman Jagdeep Dhankhar on Thursday (February 9), Kharge cited Article 105 of the Constitution that deals with the privileges and powers of parliamentarians. What is the provision and how does it protect MPs?

What does Article 105 say?

Article 105 of the Constitution deals with "powers, privileges, etc of the Houses of Parliament and of the members and committees thereof", and has four clauses. It reads:

"(1) Subject to the provisions of this Constitution and to the rules and standing orders regulating the procedure of Parliament, there shall be freedom of speech in Parliament.

(2) No member of Parliament shall be liable to any proceedings in any court in respect of any thing said or any vote given by him in Parliament or any committee thereof, and no person shall be so liable in respect of the publication by or under the authority of either House of Parliament of any report, paper, votes or proceedings.

(3) In other respects, the powers, privileges and immunities of each House of Parliament, and of the members and the committees of each House, shall be such as may from time to time be defined by Parliament by law, and, until so defined, shall be those of that House and of its members and committees immediately before the coming into force of section 15 of the Constitution (Forty-fourth Amendment) Act, 1978.

(4) The provisions of clauses (1), (2) and (3) shall apply in relation to persons who by virtue of this Constitution have the right to speak in, and otherwise to take part in the proceedings of, a House of Parliament or any committee thereof as they apply in relation to members of Parliament."

Simply put, Members of Parliament are exempted from any legal action for any statement made or act done in the course of their duties. For example, a defamation suit cannot be filed for a statement made in the House.

This immunity extends to certain non-members as well, such as the Attorney General for India or a Minister who may not be a member but speaks in the House. In cases where a Member oversteps or exceeds the contours of admissible free speech, the Speaker or the House itself will deal with it, as opposed to the court.

So are there absolutely no restrictions on this privilege?

There are some, indeed. For example Article 121 of the Constitution prohibits any discussion in Parliament regarding the "conduct of any Judge of the Supreme Court or of a High Court in the discharge of his duties except upon a motion for presenting an address to the President praying for the removal of the Judge..".



Where did the idea of this privilege of Parliament originate?

The Government of India Act, 1935 first brought this provision to India, with references to the powers and privileges enjoyed by the House of Commons in Britain. An initial draft of the Constitution too contained the reference to the House of Commons, but it was subsequently dropped.

However, unlike India where the Constitution is paramount, Britain follows Parliamentary supremacy. The privileges of the House of Commons is based in common law, developed over centuries through precedents.

In the 17th-century case 'R vs Elliot, Holles and Valentine', Sir John Elliot, a member of the House of Commons was arrested for seditious words spoken in a debate and for violence against the Speaker. However, the House of Lords provided immunity to Sir John, saying that words spoken in Parliament should only be judged therein.

This privilege has also been enshrined in the Bill of Rights 1689, by which the Parliament of England definitively established the principle of a constitutional monarchy.

In the 1884 case of 'Bradlaugh v. Gosset', then Chief Justice Lord Coleridge of the House of Lords observed: "What is said or done within the walls of Parliament cannot be inquired into in a court of law."

And what have courts in India ruled?

* In the 1970 ruling in 'Tej Kiran Jain v N Sanjiva Reddy', the Supreme Court dismissed a plea for damages filed by the followers of the Puri Shankaracharya against parliamentarians.

The judgment recalled that "in March 1969, a World Hindu Religious Conference was held at Patna. The Shankaracharya took part in it and is reported to have observed that untouchability was in harmony with the tenets of Hinduism and that no law could stand in its way, and to have walked out when the National Anthem was played."

The petitioners claimed that when the issue was debated in Parliament, uncharitable remarks were made against the seer. The petitioners argued that the MPs' immunity "was against an alleged irregularity of procedure but not against an illegality".

However, the SC ruled that "the word "anything" in Article 105 is of the widest import and is equivalent to 'everything'."

* Almost two decades later, in 1998, the SC in the case of 'P V Narasimha Rao vs. State' answered two questions on parliamentary privilege, broadly relating to questions of corruption.

In 1993, Narasimha Rao was Prime Minister of a minority government at the Centre. When a vote of no-confidence was called by members of the opposition against the government, some factions of the ruling party paid Jharkhand Mukti Morcha (JMM) members to vote against the motion. The motion was defeated in the House, with 251 members supporting it and 265 members against it.

Two questions came before the Supreme Court.

One, whether MPs could claim immunity from prosecution before a criminal court on charges of bribery related to parliamentary proceedings, under Articles 105(1) and 105(2).



Two, whether an MP is a “public servant” under the Prevention of Corruption Act, 1988.

A five-judge Bench of the apex court ruled that the ordinary law would not apply to the acceptance of a bribe by an MP in case of parliamentary proceedings. “Broadly interpreted, as we think it should be, Article 105(2) protects a Member of Parliament against proceedings in court that relate to, or concern, or have a connection or nexus with anything said, or a vote given, by him in Parliament,” the court said, giving a wider ambit to the protection accorded under Article 105(2).

The Court rationalised this by saying it will “enable members to participate fearlessly in Parliamentary debates” and that these members need the wider protection of immunity against all civil and criminal proceedings that bear a nexus to their speech or vote.

THE MAN FROM THE MOUNTAINS

Khardung La, the world’s highest motorable mountain pass at a height of 17,582 feet in India’s youngest Union Territory (U.T.) of Ladakh, hit the headlines for a different reason on Republic Day this year. The move by engineer-turned-innovator Sonam Wangchuk, 51, to organise a rare five-day climate fast at Khardung La, 40 km from Leh, has thrown a major challenge to the Lieutenant-Governor’s administration as well as the Centre on the demand of granting special status to Ladakh.

The 2009 Aamir Khan-starrer Bollywood blockbuster, *Three Idiots*, was the first time Mr. Wangchuk came under the national spotlight. The character Phunsukh Wangdu, a maverick non-conformist played by Khan, saw shades of similarity with Mr. Wangchuk’s way of living and idea of life. Mr. Wangchuk is uncomfortable in wearing the tag of Wangdu because he has “his own hard-earned identity”.

However, Mr. Wangchuk’s unconventional but innovative school, the Students’ Educational and Cultural Movement of Ladakh (SECMOL), had stark similarities with Wangdu’s school in the movie, with indigenous technology making lighting, cooking, and even heating running on solar energy.

His contribution to Ladakh’s education sector, climate-related issues and ingenious solutions to local problems has earned him around 15 awards so far, including the Ramon Magsaysay award (2018), Eminent Technologist of the Himalayan Region (2018) and Global Award for Sustainable Architecture (2017).

Alarmed by the impact of climate change on Ladakh, which is witnessing receding glaciers that feed the Indus river, Mr. Wangchuk on January 21 proposed to hold a five-day fast at Khardung La, where temperature dips to minus-40 degrees Celsius at night, to attract the attention of Prime Minister Narendra Modi to the policies pursued by the Lieutenant-Governor’s administration in Ladakh.

He claimed that the Centre’s decisions had yielded no good results for Ladakh in the past three years, after it became a U.T.

This, he said, forced him to start the climate fast. He believes the special status guaranteed under the Sixth Schedule of the Constitution, which empowers local elected bodies rather than the bureaucracy to take decisions on the protection of land, culture and identity, is the only solution to tackle climate change and protect the distinct identity of Ladakh. “Ladakh is a sensitive region



and it needs to be handled carefully,” Mr. Wangchuk said, in a veiled reference to China sitting on its borders.

‘House arrest’

Mr. Wangchuk was disallowed to travel to Khardung La and was restricted to the HIAL campus in Phyang, located at a height of 11,500 ft. He was asked to sign a bond to be careful in his speeches and statements and asked to pay ₹40,000 as surety money.

“There was a survey done in Ladakh recently to rank the administration’s performance on a scorecard of five. Most people gave 0-1 marks. It’s this fact the administration wanted to hide by putting me under house arrest and harassing my students,” he said.

But none of these did put out the fire he triggered. The video of Mr. Wangchuk slipping into a sleeping bag on January 21 under open skies with temperature plummeting to minus-16 degree Celsius set the political temperature soaring in Ladakh. Bridging the geographical and political divide between Kargil and Leh, the twin districts of Ladakh, locals as well as political and religious organisations rallied behind Mr. Wangchuk.

A day after he ended his fast on January 26, Ladakh witnessed a spectacle at Polo Ground, Leh, where crowds, who walked long distances to see him, chanted, “We want Sixth Schedule.” Special prayers were held in Buddhist Viharas and other religious places for Mr. Wangchuk’s safety during fasting. While Ladakh rapper Miss Ladoll composed a song on Sixth Schedule, students in Kargil sang Habib Jalib’s poem Main Nahi Manta, Main Nahi Janta (I won’t agree..). Support pours in. But for the mountain man, there’s no rest until he meets his goals.

THE 30 CRORE MISSING VOTERS ARE MOSTLY YOUNG, URBAN, OR MIGRANTS

India has witnessed a more than four-fold increase in the number of electors since 1962 to over 94.5 crore this year, but almost one-third of them stayed away from exercising their franchise in the last Lok Sabha polls. This has prompted the Election Commission of India (ECI) to walk the extra mile to bring them to the polling booths. Amid talks of taking the voter turnout to 75%, the ECI has recognised that people from urban areas, young voters, and migrants formed a big part of the 30 crore missing voters in the last Lok Sabha election. In order to woo these demographics, the ECI has taken a multi-pronged approach ranging from conducting awareness campaigns to introducing remote voting systems.

In November 2022, Chief Election Commissioner Rajiv Kumar participated in an awareness rally in Pune and requested voters in urban areas as well as young electors to increase their participation in the election process. During the Gujarat and Himachal Pradesh Assembly elections in December, the ECI rued the fact that the “voter turnout figure was dampened by urban apathy.” Quoting figures, the ECI stated that “major cities in Gujarat have recorded not only a decline in voting percentage as compared to the 2017 elections, but have also voted much less than the State average in 2022.”

To address the issue of migrants missing from the election process, the ECI announced in December that it has developed a prototype for a Multi-Constituency Remote Electronic Voting Machine which would enable remote voting by migrant voters. Remote Electronic Voting Machines can handle multiple constituencies from a single remote polling booth.



From 21.63 crore electors in 1962, the count increased to 91.05 crore in 2019. The total number of voters on January 1 this year was 94,50,25,694 (94.5 crore). The voter turnout has increased significantly in recent years and crossed the 65% mark in the last two general elections. But 35% still remain absent from the process.

As the ECI said, urban apathy is a major factor. Nearly all the constituencies listed are in the capital districts of the respective States or part of other urban centres. For instance, in Karnataka, the constituencies — Bangalore south, Bangalore central and Bangalore north — recorded the three lowest voter turnouts in the State in the last general election. All three seats are in the capital city. This pattern can be observed in the other States listed as well.

The ECI has a big task on hand given that India's number of registered voters is almost four times that of the U.S., the second country on the list. India's voter base exceeds the combined numbers of the U.S., Indonesia, Brazil, Russia, Pakistan and Japan.

India's vote share lagged behind the turnouts recorded in Bangladesh (80%), Brazil (79.2%) and Sri Lanka (75%), but surpassed the turnouts in Russia (51%), Pakistan (50%) and Nepal (61%).

ANDHRA PRADESH'S CAPITAL CONUNDRUM

The story so far:

Ever since the State of Andhra Pradesh was bifurcated by the Andhra Pradesh Reorganisation Act of 2014, creating the State of Telangana and the State of Andhra Pradesh, the issue of a capital city has always been a contentious issue for A.P. Nara Chandrababu Naidu of the Telugu Desam Party (TDP) who had come to power in June 2014 with the bifurcation of the State had gone with Amaravati for a capital city. The government then passed the AP CRDA Act, and established the AP Capital Region Development Authority for the purpose of planning, executing, financing and securing the planned development of the capital region development area. A land pooling scheme was offered to the farmers in the capital region and about 33,000 acres were acquired for building the capital.

Why did Mr. Naidu choose Amaravati?

The Sivaramakrishnan Committee appointed in 2014 favoured decentralisation and suggested the Vizag sub-region, as a potential capital space. However, Mr. Naidu was of the opinion that Visakhapatnam was already a developed city and had called it, post-bifurcation, as the 'financial capital' of the State. He wanted a greenfield capital in a new region for development.

What changed?

In 2019, YSR Congress defeated TDP to form the government and immediately appointed the G.N. Rao Committee to give a report on the earlier decentralised capital idea. Based on the report, current Chief Minister Y.S. Jagan Mohan Reddy came up with the idea of making Visakhapatnam the executive capital, Kurnool the judicial capital and Amaravati the legislative capital. In January 2020, the Assembly approved the repealing of the AP CRDA Act and passed the AP Decentralisation and Inclusive Development of All Regions Bill, 2020. However, about 63 farmers approached the A.P. High Court against the new Act and after sustained agitation and court proceedings, in March 2022, the A.P. High Court gave a verdict stating that the State government should follow through with the earlier AP CRDA Act where Amaravati would be the State capital.



Following the verdict, in September 2022, the A.P. Government filed an appeal in the Supreme Court against the High Court's verdict, citing infringement of rights to federalism by the High Court and arguing that it is the State's prerogative to decide on its capital city.

On November 28, 2022, the Supreme Court stayed the Andhra Pradesh High Court's order for developing Amaravati as the only capital of the State, saying courts can't act as a town planner. But it has reserved its final judgment and the hearing process is still on.

What happened now?

On January 31, Mr. Reddy in an investors summit at New Delhi declared that Visakhapatnam will shortly become the capital and that he will also be shifting to the port city. Opposition parties pointed out that it was contempt of court, as the case was still pending in the Apex Court. A senior advocate of A.P. High Court G. Lakshminarayana has written a letter to the Chief Justice of India citing that the CM has grossly violated Section 2(C) of Contempt of Courts Act, 1971 as his remarks amounted to undermining the authority of the Supreme Court, and interfering with the administration of justice with regard to the capital city of A.P.

While the State is primarily fighting on the grounds of infringement of federal structure, a few critical legal aspects such as property rights and contractual obligations to farmers need to be considered.

WITH JHARKHAND GOVT NOT PLAYING BALL WITH CENTRE, 8 BILLS FROM 2015 TO 2021 IN LIMBO

All pending Bills barring one were sent for Presidential assent during the previous BJP govt, with the Centre issuing 13 reminders for one of them.

Despite several reminders, the Jharkhand government has not responded to the "desired comments or clarifications" that the Centre has sought on eight state Bills it had sent for Presidential assent between 2015 and 2021. Among these Bills, The Contract Labour (Regulation and Abolition) (Jharkhand Amendment) Bill, 2015 got 13 such reminders from the Centre.

The matter came to light on January 6 this year, when the principal secretary to the Jharkhand Governor, Nitin Madan Kulkarni, wrote to Jharkhand chief secretary Sukhdev Singh to make the clarifications "available as soon as possible so that further action can be taken". This was after the Union Ministry of Home Affairs (Judicial Wing) sent a letter to Kulkarni, reminding him that the Bills were "pending for further processing".

The previous Raghubar Das-led BJP government was in power during 2014-19. The current Chief Minister, Hemant Soren, took over in 2019. All the pending Bills barring one were sent for the Presidential assent during the Das government's tenure and most of the central reminders were also sent then.

In the Centre's letter dated January 3, 2023 to the Governor's principal secretary Kulkarni, MHA under-secretary VK Patnayak stated: "The bills were forwarded by your secretariat seeking the assent of the President...The requisite comments/clarifications of the state government on the comments of nodal Central ministries/departments sought by this Ministry in respect of the Bills have not yet been received despite several reminders. In absence of the reply from the state government, the bills are pending for further processing...You are requested to get the



response/clarification of the concerned Departments of the state government expedited so that these bills can be processed further.”

Sources in the Soren government said the Bills it had recently passed in the Assembly are currently only with Governor Ramesh Bais and are as old as only two weeks. The issue has cropped up at a time the ruling Jharkhand Mukti Morcha (JMM) has been accusing Bais of “unnecessarily delaying” the release of the Election Commission’s letter on Soren’s mining lease.

Sukhdev Singh was not available for comments. Sources in the government, however, claimed that most of the eight pending Bills were amendments that were passed “hastily”.

“Most of the Bills are made or amended in an ad hoc manner without applying the mind. For instance, in one of the labour Bills, the state government had amended the provisions which were already amended by the Centre. It was, therefore, asked to withdraw. In a bid to attain immediacy, the Bills are written in an ad hoc manner. The entire process seems to be a waste of energy and time.”

ROW OVER NAGALAND DGP: HOW ARE STATE POLICE CHIEFS APPOINTED?

The Nagaland government on Saturday issued an order appointing Rupin Sharma as Director General of the state police, and relieved him of the charge of Home Guards and civil defence.

On January 23, the Supreme Court had directed the Nagaland government to appoint the 1992-batch IPS officer as police chief within a week. The order was passed after Nagaland challenged the Union Public Service Commission’s (UPSC) recommendation of Sharma as the only candidate for the post.

How did this situation arise?

Nagaland’s previous DGP, T John Longkumer, was due to retire in August 2022, but the Union Home Ministry gave him a six-month extension, allowing him to remain in office beyond the date of his superannuation. Following a legal challenge by a students union, the Supreme Court asked the state to send a panel of eligible officers for the post to the UPSC.

The state’s list had Sharma and A Sunil Achaya, an officer of the 1991 batch of the IPS. But Achaya, an additional secretary in the Cabinet Secretariat, was unwilling to return to his parent cadre, so the UPSC sent only Sharma’s name to Nagaland for consideration. Sharma alone met the criterion of a minimum 30 years of service, the UPSC said.

The state objected, arguing that the Supreme Court had said in the Prakash Singh judgment (2006) that the panel must have at least three officers — and UPSC must therefore reduce the service length criterion to 25 years (so that more officers become eligible).

However, the SC ruled in favour of UPSC, saying this could create a situation in which a senior officer is forced to function under an officer five years junior to him. It also said that the stipulation of three officers in the panel was not sacrosanct.

What did Prakash Singh say?

Appointments of DGPs are now made on the basis of the Supreme Court judgment on police reforms in Prakash Singh vs Union of India 17 years ago. According to the SC’s guidelines on the appointment of police chiefs, the DGP is to be selected by the state government from among the



three senior most officers who have been empanelled for promotion to that rank by the UPSC “on the basis of their length of service, very good record and range of experience for heading the police force”.

The DGP should have a fixed tenure of two years in the post, irrespective of the date of retirement. A DGP can be removed only in exceptional circumstances.

So what is the process of appointment?

Based on the judgment, the UPSC issued its own guidelines in 2009 on the appointment of police chiefs of states. According to these guidelines, states are supposed to draw up and send to the UPSC a list of eligible officers with at least 30 years of service behind them, along with these officers’ service record, performance appraisal, and vigilance clearance.

These officers are to be of the rank of ADG or the rank of police chief (and one below) stipulated for that state. The list is supposed to be given to UPSC six months before the incumbent DGP is to retire.

An empanelment committee headed by the UPSC chairman, and with the union home secretary, state chief secretary, state DGP, and the chief of a central police organisation in it, is supposed to select a panel of three officers “based on merit”. For smaller states that may have only one cadre post of DGP, the committee is supposed to send two names.

In the case of Nagaland, only two officers fulfilled the criteria of 30 years of service. One among these officers pulled out, so only one officer’s name was sent to the state. Interestingly, while the UPSC submitted that Achaya had pulled out of the race, the Home Ministry in its affidavit said Achaya could not be relieved as he was shouldering an important responsibility at the Centre.

Under the rules, consent of an officer is not required for her posting. Also, the Centre has the power to not relieve an officer for posting in the state.

UPSC also submitted that while the 30-year rule could be relaxed to 25 years in states like Himachal Pradesh, Manipur, Nagaland, Uttarakhand, Tripura, and Sikkim which may not have enough officers meeting this criterion, this is to be done with the consent of the Centre.

Through two orders passed in 2018 and 2019, the SC has also stipulated that the UPSC shall not put in the panel any officer with less than six months to retirement.

How closely is this system followed?

Sources said that while the SC has said there must be no temporary or ad hoc appointments of police chiefs, at least four states currently have interim chiefs.

In Nagaland, former DGP Longkumer had to quit midway in his extended tenure only after a petition was filed in the court.

In Delhi, S N Srivastava, who was appointed commissioner of police in 2020, spent almost his entire tenure in interim status, and was succeeded by an interim commissioner.

The Centre has used the Prakash Singh judgment selectively. In 2021, it rejected the candidature of Rakesh Asthana and Y C Modi as CBI Director on the ground that they had less than six months to go for retirement, but appointed Asthana as commissioner of Delhi Police a day before his retirement.



So does the process of appointment itself carry the seeds of disputes such as the one involving DGP Rupin Sharma?

Sources in the police establishment said UPSC had no option in the Rupin Sharma case given that only two officers were eligible; however, problems often arise because the UPSC has of late relied mainly on seniority to draw up the panel of officers.

The Prakash Singh judgment made it clear that UPSC must prepare the panel based on seniority, service record, and range of experience. The SC has also repeatedly emphasised on “merit” as the basis of appointment.

“If a state has given a list of, say, a dozen officers, it may not be the case that they think that just the three most senior among them are fit for the job. There may be more meritorious officers below them in the list. If only the three most senior officers are to be chosen, the expertise of the UPSC panel is not required at all. The state can do it on its own,” a senior official said.

Sources said the exit of UP DGP Mukul Goel in May 2022, just 10 months after his appointment, was a result of the state-Centre friction. The state was given a list of three officers (according to seniority) and Goel had to be chosen out of it. The state, sources said, believed there were officers more meritorious below those mentioned in the list. Finally, Goel was removed for “disregarding official work”, much to the embarrassment of the officer.

But this has not been the case at all times.

In 2019, the appointment of IPS officer Dinkar Gupta, who is now the chief of the National Investigation Agency (NIA), as Punjab DGP was challenged in the court by those senior to him, one among them being IPS officer Mohd Mustafa. The UPSC then defended its decision on the grounds of “merit” over “seniority”. It argued that it had prepared the panel judging the officers on five parameters of policing based on “very good service record and range of experience”. The state argued that Gupta fared the best on those indices.

The Supreme court rejected the challenge of Mohd Mustafa, holding that “the appellant was found to be inadequate for inclusion in the panel in the range of experience for core policing areas” despite being senior.

Prakash Singh, the former UP DGP and police reforms crusader, told The Indian Express: “UPSC is not discharging its duty up to expectations. It appears they are vulnerable to pressures from interested quarters.”

DELHI UNIVERSITY TO REPLACE ROBES WITH ANGAVASTRA FOR CONVOCATION: WHY ARE ROBES AND CAPS WORN AT GRADUATION?

The image of students at a graduation ceremony throwing their square caps in the air is common in universities across the world. But come February 25, students and officials of the University of Delhi (DU) will wear the Indian angavastra (a stole-like garment draped over the shoulders) at the 99th convocation ceremony, instead of the typical black robes. A convocation committee set up by DU Vice-Chancellor about two months ago came up with new design ideas for the attire.

D S Rawat, the Dean of Examination and head of the committee, told The Indian Express, “We have been planning this for quite some time. We wanted to change the colonial issues, so we spoke about changing the academic costume.”



That isn't to say this is a novel decision. In 2019, the University of Mumbai also changed its convention, and so did other colleges in Maharashtra even before this move. But why are such robes part of the ceremony in the first place? We explain.

The history of the 'scholar robe' and cap

Many universities in their present form have been inspired by centuries-old institutions in Western countries that enjoy significant prestige. Their conventions often become standard practice for others to follow. Something similar has happened with graduation attire in many countries.

But some sources also attribute robes to Islamic scholars in West Asia and North Africa, and that they made their way westward. Madrasa Al Azhar in Egypt, established in the 10th Century, is cited as the source for wearing these robes began according to 'The Rise of Colleges: Institutions of Learning in Islam and The West' (1981) by George Makdisi. As was the case in Europe, institutions of higher learning in these regions were initially for the purpose of religious teachings, later moving towards law, mathematics and astronomy.

According to the Massachusetts Institute of Technology (MIT), one of the world's most reputed institutes for sciences, the academic dress dates back to the 12th and 13th centuries, when European universities were emerging from religious organisations. The ordinary dress of the scholar, therefore, was that of a cleric. Medieval scholars generally had shaved heads. Hoods or caps like the pileus were worn, resembling a skullcap, to protect the head. The square caps (called mortarboards) worn nowadays came later.

OFF THE BEATEN TRACK, THIEVES MAKE AWAY WITH RAILWAY LINE IN MADHUBHANI

Nearly two kilometres of an abandoned railway track, estimated at crores of rupees, in Madhubani district of Bihar was found to have been stolen and sold to scrap dealers, allegedly with the connivance of a few Railway Protection Force (RPF) personnel. Two of the personnel have been suspended from service.

The track, connecting the Pandaul and Lohat Sugar Mill stations in Samastipur railway division, had been left abandoned for a long time following the closure of the mill. According to Bum Bum Thakur, a villager, the thieves, posing as railway employees, had cut the track and sold it to scrap dealers.

Once the villagers noticed that a part of the track was missing, they informed the local police and RPF officials. Following this, a team of the RPF from Darbhanga and Railway Vigilance officials started an investigation. Srinivas and Mukesh Kumar Singh of the RPF were suspended from service on the charge of "dereliction of duty". "A departmental-level inquiry committee has been formed for investigation and the two RPF personnel were suspended for not informing the theft to the department on time," Ashok Agrawal, Divisional Railway Manager, Samastipur, said.

Raw sugar cane used to be carried from Jeynagar to Madhubani and from there to Pandaul and Lohat Sugar Mill by trains on the railway track, but once the sugar mill was closed, the railway track was abandoned.

In April 2022, a 60-foot-long abandoned iron bridge across the Sone river was stolen by thieves posing as State Irrigation Department employees from Amiyawar village in Rohtas district of Bihar. Later, two mobile towers were stolen from Patna's Subzibagh and Yarpur Rajputana area



by thieves posing as telecom workers. In November 2022, an entire diesel engine was stolen part by part from a railway yard at Barauni in Begusarai district.

Senior State BJP leader and Leader of the Opposition Vijay Kumar Sinha on Tuesday slammed the Nitish Kumar government for such bizarre cases of theft in Bihar. He said law and order in the State had collapsed.

WHAT HAPPENED TO YOUR DATA ON AAROGYA SETU?

Contact tracing data of citizens that were collected through the Aarogya Setu app has been deleted and the feature disabled, Minister of State for Electronics and IT Rajeev Chandrasekhar has told Parliament.

The app was launched as a contact tracing platform by the Centre during the first wave of the Covid-19 pandemic in 2020. It has faced at least two lawsuits over the government's insistence that it be mandatory for visiting key institutions like airports. Since the easing of the pandemic restrictions, it has morphed into a larger health app of sorts, through its integration with the Ayushman Bharat Digital Mission.

What were the concerns with Aarogya Setu?

There were primarily two concerns: the app's mandatory nature, and privacy issues emanating from its data collection and sharing. Aarogya Setu was initially mandatory for rail and air travel, among other things, and the concerns raised around this were that people availing rail services for instance, may not own a smartphone, which was necessary to use the app. In fact, not just government bodies, but a number of private entities like Zomato and Swiggy made it mandatory for their delivery workers to install the app, and showed that status to customers placing food orders on their platforms.

People also raised privacy concerns given the nature of data the app needed to function. While the government claimed the data was encrypted and anonymised, it was unclear what anonymisation protocols were being used. The app also offered a static anonymisation ID, which privacy experts claimed was a weaker model compared to dynamic anonymisation IDs that were being offered on contact tracing tools launched by Apple and Google.

To that end, a petition was filed in the Karnataka High Court in 2020 against the mandatory nature of the app and its data collection practices. The court refused to stay the use of the app, but held that the Centre cannot deny any services to a citizen on the ground that the user does not have Aarogya Setu. The court also said the data collected via the Aarogya Setu application cannot be shared with other parties beyond what is specified in the privacy policy presented to users.

So, what's next for Aarogya Setu?

When it launched, privacy activists had speculated that there was a significant scope of 'function creep' in Aarogya Setu. This meant the app may be used, eventually, for a different purpose than originally intended.

Last February, the National Health Authority announced the integration of its flagship Ayushman Bharat Digital Mission with the Aarogya Setu app, allowing users to create 14-digit unique Ayushman Bharat Health Account numbers from the app.



The app will also have additional functionalities like sharing health status through a QR code, Open API, health advisories, and testing lab details, National Informatics Centre Director Seema Khanna had earlier said.

CENTRE BLOCKS 200 ONLINE PLATFORMS UNDER SECTION 69(A) OF IT ACT: WHAT IS THE PROVISION, THE DEBATE AROUND IT

The Ministry of Electronics and Information Technology (MeitY) recently issued orders to block 138 online betting platforms and 94 money lending apps on an “urgent” and “emergency” basis under Section 69(A) of the Information Technology Act, 2000.

The decision was based on a recommendation of the Ministry of Home Affairs (MHA), which had received inputs from central intelligence agencies that some of the sites and apps were allegedly linked to China and contained “material prejudicial to the sovereignty and integrity of India”.

What is the danger posed by lending apps?

Over the past three years, several police complaints have been received of extortion and harassment from people who borrowed small amounts through such money-lending apps, often at exorbitantly high interest rates.

In December 2020, DNM Santosh Kumar, a native of Visakhapatnam, died by suicide allegedly after facing harassment by lending apps. Similarly, the Cyber Police Station of Pune received 699 complaints of loan app crimes in 2020. The number increased to 928 in 2021. As many as 3,151 complaints were filed against the loan app operatives till August 2022.

Following this, the MHA started investigating Chinese loan-lending apps and found out that while only 94 are available on e-stores, others are operating through third-party links or websites.

What is Section 69 of the IT Act?

Section 69 of the IT Act allows the government to issue content-blocking orders to online intermediaries such as Internet Service Providers (ISPs), telecom service providers, web hosting services, search engines, online marketplaces, etc. However, the Section requires the information or content being blocked to be deemed a threat to India’s national security, sovereignty, or public order.

If the Centre or state government are satisfied that blocking the content is “necessary” and “expedient” on grounds of “sovereignty or integrity of India, defence of India, security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of any cognizable offence relating to above or for investigation of any offence,” it may, for reasons to be recorded in writing, direct any agency “to intercept, monitor or decrypt or cause to be intercepted or monitored or decrypted any information generated, transmitted, received or stored in any computer resource,” the law says.

What is the procedure to block such apps?

Since 2009, the MeitY has possessed blocking powers similar to those of the Ministry of Information & Broadcasting. Although MeitY derives these powers from the IT Act, it is the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009 or the IT Rules, 2009, which explain the process to issue such orders. The IT



Rules include provisions such as review committees, the opportunity for a fair hearing, strict confidentiality, and maintenance of records by designated officers.

However, there are no recorded instances of the MeitY providing individuals with pre-decisional hearings even while blocking non-emergency content.

What have the courts said?

In a landmark 2015 ruling, the Supreme Court in “Shreya Singhal vs Union of India” struck down Section 66A of the Information Technology Act of 2000, which entailed punishment for sending offensive messages through communication services, etc.

“Section 66A of the Information Technology Act, 2000 is struck down in its entirety being violative of Article 19(1)(a) and not saved under Article 19(2),” the Court held.

The plea had also challenged Section 69A of the Information Technology Rules 2009, but the SC held this to be “constitutionally valid”.

“It will be noticed that Section 69A unlike Section 66A is a narrowly drawn provision with several safeguards. First and foremost, blocking can only be resorted to where the Central Government is satisfied that it is necessary to do so. Secondly, such necessity is relatable only to some of the subjects set out in Article 19(2). Thirdly, reasons have to be recorded in writing in such blocking order so that they may be assailed in a writ petition under Article 226 of the Constitution,” the Court noted.

The debate over Section 69A was revisited in July 2022 when Twitter sued the MeitY in the Karnataka HC over blocking orders that failed to adhere to the procedural requirement of giving users a hearing.

In response, the Centre told the HC that Twitter was a foreign corporation and did not have any fundamental right or legal remedy. After that, Twitter clarified that their arguments under Articles 14, 19, and 21 were in relation to the rights of the citizens who had Twitter accounts.

On February 8, the most recent date of hearing in this matter, the Centre questioned Twitter’s locus standi to argue the fundamental rights of account holders and also questioned what the jural relationship between Twitter and its account holders would be.

What are some other instances of the government using Section 69A?

Following cross-border tensions with China, the MeitY banned 59 apps on June 29, 2020, including TikTok, Shareit, Shein, Xiaomi Mi Community, Clash of Kings, Weibo, Likee, etc. Similarly, on September 1, 2020, the government banned 118 apps, including the gaming app PUBG, followed by another ban on 49 apps on November 19, 2020.

More recently on February 14, 2022, the MHA recommended a ban on 54 Chinese mobile applications, including the popular game Garena Free Fire, a Singapore-based app, invoking Section 69A on account of possible concerns surrounding privacy issues and security threats.



RAIL TRACKS TOO CLOSE, SCIENTISTS AIR CONCERN FOR WORLD'S LARGEST RADIO TELESCOPE

The 'in-principle' approval, given during a meeting held in New Delhi between Railway Minister Ashwini Vaishnaw and the Maharashtra delegation led by Deputy Chief Minister Devendra Fadnavis, came as a 'big surprise' to GMRT officials.

The proposed Rs 16,000-crore Pune-Nashik high-speed rail project could jeopardise the operations of the Giant Metrewave Radio Telescope (GMRT), the world's largest radio telescope near Pune.

The Ministry of Railways gave 'in-principle' approval to the project, being executed by Maharail, on February 5. If the project is implemented, the rail route would cut through the GMRT array of 30 parabolic antennas installed in a 'Y' fashion across 30 km in a radio-quiet region in Pune district's Narayangaon area.

The GMRT site is situated off the Pune-Nashik highway and was painstakingly chosen by an eminent jury of scientists, including late Govind Swarup, in the early 1980s for posing minimal man-made noise and found suitable for being favourable for long-term operations of a sensitive radio observatory.

After full-scale telescope operations commenced in 2000, GMRT has made a number of path-breaking discoveries and continues to remain a unique global facility. Since 2019, when the telescope underwent its first major upgrade (and now known as upgraded GMRT), it has achieved higher sensitivity and possesses a capability to peer deeper into the unexplored areas of our Universe. For instance, the improved computational capacity is now capable to perform data transfer at a speed of up to 40 GB/sec, allowing the uGMRT to produce useful scientific data to the tune of several Terabytes/day, which is utilised by astronomers from all over the world.

The 'in-principle' approval, given during a meeting held in New Delhi between Railway Minister Ashwini Vaishnaw and the Maharashtra delegation led by Deputy Chief Minister Devendra Fadnavis, came as a 'big surprise' to GMRT officials.

The high-speed railway line will cover a distance of 235 km in under two hours. As per the proposal, prepared by the Maharashtra Railway Infrastructure Development Corporation (MRIDC), trains will run at a speed of 200 km/hr and stop at a total of 24 stations — eight major and 16 small ones — passing through the three districts of Pune, Ahmednagar and Nashik.

"Though there have been discussions with officials of MRIDC since early last year when we approached them with our problems from the proposed line, a resolution has not been found yet. Being a world-class observatory, we are worried about the radio noise and interference that are expected from this rail project. We are not against this project and believe in co-existence. However, our concerns and scientific interests, too, should be factored in," a senior official from GMRT told The Indian Express.

According to the proposed rail route, a majority of the dish antennas of GMRT come within unacceptably close range of the railway line, the officials from GMRT said.

GMRT is a project of the Department of Atomic Energy (DAE), operating under the Tata Institute of Fundamental Research (TIFR). GMRT is a unique facility functioning within the frequency bandwidth of 100 Mhz-1,500 MHz. Built and operated by TIFR's National Centre for Radio



Astrophysics, Pune, it is a highly sought-after telescope both within India and by scientists from 30-plus countries. As such, the GMRT enjoys special protection for carrying out its sensitive observations in the above frequency range.

What could emerge as a silver lining for GMRT is a revision of the Detailed Project Report as some technical errors were pointed out by the Ministry of Railways, as admitted by Fadnavis. Thereafter, the rectified DPR will be sent for the Cabinet's final approval.

ISRO'S SSLV-D2 LAUNCH: THE MINI VEHICLE'S SECOND FLIGHT, WITH PROMISE ON BOARD

In its second development flight on Friday (February 10) morning, the Small Satellite Launch Vehicle (SSLV-D2) was launched successfully from the first launch pad at the Satish Dhawan Space Centre SHAR, Sriharikota, Andhra Pradesh. It will place the Indian Space Research Organisation (ISRO) earth observation satellite EOS-07 and two co-passenger satellites — Janus-1 and AzaadiSat2 — developed by start-ups, in a 450-km circular orbit around the Earth.

The mission of ISRO's smallest vehicle — scheduled for 9.18 am — lasted around 15 minutes. It was ISRO's first launch of 2023.

What's the aim of the launch?

The new vehicle was developed to capture the emerging small and micro satellite commercial market, with launches offered on demand. The rocket can be assembled by a small team in only a few days, compared to the six months and around 600 people it takes for ISRO's workhorse PSLV.

Our plan is to make it available in a week's time — the assembly can be done in two days, [followed by] two days of testing, and the next two days we are doing the rehearsal and launch. We have already done that this time," ISRO chairman S Somanath had told The Indian Express earlier.

This is the second attempt at a launch. What happened the last time?

The launch vehicle uses three solid stages followed by a liquid-fuel-based Velocity Trimming Module (VTM) to place satellites in orbit. The vehicle's first development flight that took place last August after repeated delays due to the pandemic, failed to place the satellites in precise orbit.

This was because of excessive vibration sensed by accelerometers during the second stage separation, which made the on-board system 'think' that the sensors were faulty. For the second flight, structural changes have been made to the equipment bay, along with changes in the separation mechanism for stage 2, and logic changes for the on-board system.

A new vehicle is declared operational by the space agency after it completes two successful development flights. The last vehicle to be declared operational was the GSLV Mk III, now called LVM 3, when it carried Chandrayaan-2 in 2019.

What is Janus-1?

Janus-1 is a technology demonstrator satellite built by United States-based Antaris and its Indian partners XDLinks and Ananth Technologies.

"We are creating a standardised satellite bus on which multiple payloads can be attached just like lego blocks. This will enable companies to quickly and cheaply launch their payloads. Once



launched, we can handle the operations for them or give the companies access to our platform so that they can control it. We are making in India for the world,” Rupesh Gandupalli, CEO of XDLinks, said.

A satellite bus is the main structure of a satellite on which the payloads — which can be used for multiple applications such as earth observation, signal monitoring, or ship tracking — rest. The company aims to make satellite buses of different sizes, for satellites weighing around 100 kg.

Janus-1, which weighs only 10.2 kg, is a six-unit cube satellite with five payloads on board — two from Singapore, and one each from Kenya, Australia, and Indonesia. The entire satellite was built in 10 months, less than half the time it usually takes to manufacture satellites of this size, according to Gandupalli.

And what is AzaadiSat2?

The payloads have been built by 750 girl students from across India. A similar satellite by SpaceKidzIndia was launched aboard SSLV-D1 in August last year. The payloads remain the same — LoRa amateur radio, a sensor to measure radiation levels in space, and sensors to measure the health of the satellite such as temperature, reset count, and inertial data — but this second satellite has an additional feature.

SpaceKidzIndia — which aims to promote space awareness among children — has made the satellite expandable: the 8-unit satellite will have a spring mechanism-based external frame, which will open up once the satellite is in orbit. After the frame opens up, the satellite will become four times its size.

“This external frame will host a new cheaper type of solar panels to provide energy to the satellite. Energy for sustaining longer durations in space is one of the challenges of the small satellites, which is why we have made the structure expandable. This is the first time such a thing is being tried out,” Srimathy Kesan, founder and CEO of SpaceKidzIndia, said.

“The small size at the time of launch with a bigger power pack means the satellite will easily fit in the launch vehicles, and start-ups will spend less on launch services,” she added.

One hundred and fifty of the 750 students who developed some of the payloads will be in Sriharikota to witness the launch on Friday. “When the satellite failed to reach orbit last time, the children took it in their stride,” Kesan said.

The satellite will also carry the G20 logo to space and the NCC song to celebrate 75 years of the organisation; Kesan herself was the best cadet from Andhra Pradesh in 1992. The “space song” about girl children and students of rural India dreaming of becoming space scientists, has been composed by Devi Sri Prasad, popularly known as DSP.

NAVAL LCA LANDS ON VIKRANT, FIRST AEROPLANE TO TOUCH DOWN

In a major milestone, the naval variant of the indigenous light combat aircraft (LCA) landed on the first indigenous aircraft carrier, INS Vikrant, on Monday. This is also the maiden landing of a fixed-wing aircraft on the carrier. The LCA’s feat was followed by the landing and take-off by a twin-engine MiG-29K fighter jet.

In January 2020, the Defence Research and Development Organisation (DRDO) had demonstrated a successful arrested landing of the naval LCA on INS Vikramaditya and subsequently, 18 take-offs

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



and landings were conducted in five days. However, the Navy has projected a requirement for a twin-engine aircraft to operate from the carrier, and the DRDO has now embarked on developing a twin-engine deck-based fighter.

INS Vikrant, displacing a weight of 42,800 tonnes, was commissioned into the Navy last September. The aviation trials are to be carried out post commissioning. The ship uses an aircraft-operation mode known as short take-off but arrested recovery (STOBAR) for which it is equipped with a ski-jump for launching aircraft, and a set of three “arrestor wires” for their recovery onboard.

Advanced fighter

Initially, the carrier would be operating the existing MiG-29Ks in service, while a decision on procurement of an advanced fighter, between the Boeing F/A-18 E/F Super Hornet and Rafale, is expected in a few months.

The TEDBF being developed by the Aeronautical Development Agency of the DRDO is expected to be the mainstay. The project is expected to get approval from the Cabinet Committee on Security by mid-2023.

CDS CO BARS T.N.-BASED FIRM FROM MAKING EYE LUBRICANT

The Central Drugs Standard Control Organisation (CDSCO) has instructed Tamil Nadu-based Global Pharma Healthcare to stop manufacturing all the products under the category of ophthalmic preparation till the completion of an investigation. The move came soon after the U.S. Centers for Disease Control and Prevention (CDC) linked the company’s eye drops to 55 adverse events in the U.S.

On Friday, a joint team — comprising senior drug inspectors and officials from the Centre and from Tamil Nadu — visited the company’s manufacturing premises. They collected samples from four batches of “control samples” for analysis and that of the raw material, carboxymethylcellulose sodium, which was used for manufacturing the eye lubricant.

The investigation was launched on the basis of a warning by the CDC that the eye drops supplied by the company to distributors Aru Pharma/EzriCare and Delsam Pharma in the U.S. had been linked to adverse events, including eye infections, permanent loss of vision, and a death with a bloodstream infection.

During the exercise, the joint inspection team found that the firm had exported two consignments of 24 batches of the eye lubricant to the U.S. The consignments were manufactured in 2021 and 2022. No stocks of the batches concerned were found. The manufacturer had, however, maintained the control samples for the said batches. It said the “media fill validation” (a testing process) was carried out biannually, whose records were verified.

The firm said the root cause analysis in respect to the complaint was under process. On verification of the records, the inspection team observed that the stability studies for the representative batch of the said drugs were done yearly once. The inspectors gathered the relevant manufacturing records for scrutiny.



The CDC had alerted the U.S. Food and Drug Administration (FDA) to the cases of adverse events recorded in 12 States in the country. A warning issued by the FDA on Friday told consumers and doctors to not buy, and stop using, the product.

The company, which has recalled the eye drops from the market, has been placed on the FDA's import alert list for allegedly providing an inadequate response to a records request.

CAR T-CELL THERAPY: THE NEXT STEP TOWARDS A HOLISTIC TREATMENT OF CANCER

The story so far:

The three major forms of treatment for any cancer are surgery (removing the cancer), radiotherapy (delivering ionising radiation to the tumour), and systemic therapy (administering medicines that act on the tumour). Surgery and radiotherapy have been refined significantly over time whereas advances in systemic therapy have been unparalleled. A new development on this front, currently holding the attention of many researchers worldwide, is the CAR T-cell therapy.

How has systemic therapy evolved?

Systemic therapy's earliest form was chemotherapy; when administered, it preferentially acts on cancer cells because of the latter's rapid, unregulated growth and poor healing mechanisms. Chemotherapeutic drugs have modest response rates and significant side-effects as they affect numerous cell types in the body. The next stage in its evolution was targeted agents, also known as immunotherapy. Here the drugs bind to specific targets on the cancer or on the immune cells that help the tumour grow or spread. This method often has fewer side-effects as the impact on non-tumour cells is limited. However, it is effective only against tumours that express these targets.

What are CAR T-cells?

Chimeric antigen receptor (CAR) T-cell therapies represent a quantum leap in the sophistication of cancer treatment. Unlike chemotherapy or immunotherapy, which require mass-produced injectable or oral medication, CAR T-cell therapies use a patient's own cells. They are modified in the laboratory to activate T-cells, a component of immune cells, to attack tumours.

These modified cells are then infused back into the patient's bloodstream after conditioning them to multiply more effectively. The cells are even more specific than targeted agents and directly activate the patient's immune system against cancer, making the treatment more clinically effective. This is why they're called 'living drugs'.

How does it work?

In CAR T-cell therapy, the patient's blood is drawn to harvest T-cells which are immune cells that play a major role in destroying tumour cells. Researchers modify these cells in the laboratory so that they express specific proteins on their surface, known as chimeric antigen receptors (CAR). They have an affinity for proteins on the surface of tumour cells. This modification in the cellular structure allows CAR T-cells to effectively bind to the tumour and destroy it.

The final step in the tumour's destruction involves its clearance by the patient's immune system.



Where is it used?

As of today, CAR T-cell therapy has been approved for leukaemias (cancers arising from the cells that produce white blood cells) and lymphomas (arising from the lymphatic system). These cancers occur through the unregulated reproduction of a single clone of cells, that is, following the cancerous transformation of a single type of cell, it produces millions of identical copies. As a result, the target for CAR T-cells is consistent and reliable.

CAR T-cell therapy is also used among patients with cancers that have returned after an initial successful treatment or which haven't responded to previous combinations of chemotherapy or immunotherapy.

Its response rate is variable. In certain kinds of leukaemias and lymphomas, the efficacy is as high as 90%, whereas in other types of cancers it is significantly lower. The potential side-effects are also significant, associated with cytokine release syndrome (a widespread activation of the immune system and collateral damage to the body's normal cells) and neurological symptoms (severe confusion, seizures, and speech impairment).

How widespread is its use?

The complexity of preparing CAR T-cells has been a major barrier to their use. The first clinical trial showing they were effective was published almost a decade ago; the first indigenously developed therapy in India was successfully performed only in 2022.

The technical and human resources required to administer this therapy are also considerable. Treatments in the U.S. cost more than a million dollars. Trials are underway in India, with companies looking to indigenously manufacture CAR T-cells at a fraction of the cost. The preliminary results have been encouraging.

Will this therapy be expensive in India as well?

In India, introducing any new therapy faces the twin challenges of cost and value. Critics argue that developing facilities in India may be redundant and/or inappropriate as even when it becomes cheaper, CAR T-cell therapy will be unaffordable to most Indians. Those who are affluent and require the therapy currently receive it abroad anyway.

While this is true, it may be the right answer to the wrong question. Having access to a global standard of care is every patient's right; how it can be made more affordable can be the next step.

Investments in developing these technologies in India represent the hope that, as with other initially expensive treatments like robotic surgery, we will be able to provide economies of scale. The sheer volume of patients in India has the potential to drive the cost of treatment down.

What are 'cell therapies'?

The interest in the technology goes beyond providing a new lease of life to people with leukaemias and lymphomas. Even for solid tumours — like those of the prostate, lung, colon, and some other organs — CAR T-cell therapy has shown results, particularly in patients whose tumours have recurred or have evaded multiple lines of treatment. The challenge with harnessing these techniques for solid tumours remains significant. These are highly heterogeneous cancers that lack a consistent target with which CAR T-cells can bind. Progress in the field, however, has the potential to unlock a host of newer treatments on the horizon called cell therapies. They include



personalised anti-cancer vaccines and tumour infiltrating lymphocyte therapies (where white blood cells that attack the tumour are extracted, modified, and reintroduced into the patient).

Cancer constantly evolves to evade treatment; similarly, we also need to keep developing more sophisticated therapies with as few-side effects as possible. Cell therapies hold this promise and will also help us understand this dreaded disease and its complexities better.

RAILWAY CUISINE HAS COMPETITION ON THE TRACKS

It seems that railway passengers, spoiled by the convenience and variety offered by food delivery apps when they're at home, don't want a journey to disrupt this experience. This may be why the Indian Railway Catering and Tourism Corporation (IRCTC) has decided to jump into the game and offer passengers on certain trains the option of ordering food from restaurants along their route and having it delivered to them as they pass through. The first phase will see customers booking e-tickets receive a WhatsApp message with the e-catering services option, while in the second phase an AI-powered chatbot will handle all railway catering queries and even book meals for customers. This might herald the end of an era on the tracks.

Time was when one of the attractions of a railway journey was the food from the train pantry: The tear-drop shaped vegetable cutlet, crumbed and fried to crispness; hot tomato soup served with breadsticks and little pats of butter; chicken biryani and mutton curry-rice to help one slip into post-lunch slumber. So loved were some of these dishes, such as the omelette sandwich and railway mutton curry, that they found their way into recipe books and gave birth to a highly-specific genre of food. And if one tired of the food served on the train, there were always the quick dashes onto the railway platform to buy snacks and tea during halts along the route — poha at Ratlam, pazham pori at Ernakulam, lal chah at Guwahati — or the chivda, chips and biscuits brought from home for time-pass.

Perhaps even the redoubtable Indian Railways, which turns 170 years old this year, must give in to the inexorable logic of the market. It is also entirely possible that food from the train pantry tastes better in nostalgia, flavoured as it is by memories of happier times. Even so, the rich irony of ordering Railway Mutton Curry from a restaurant cannot be denied.

RAM TEMPLE TRUST YET TO DECIDE IF SHALIGRAM STONE FROM NEPAL WILL BE USED TO CARVE IDOL

The Shri Ram Janmbhoomi Teerth Kshetra Trust, overseeing the construction of the Ram Temple in Ayodhya, is yet to take a call on whether or not the main deity of the temple will be carved out of the shaligram stone sent from Nepal.

Speaking to The Hindu, Trust chairperson Nripendra Misra said that its members had to first decide how exactly the deity would look. "There is already one idol of Ram Lalla there, but we have to have another deity, just behind the original idol. That idol of the deity has to be available for darshan from at least 25 feet away, so the decision is, it will be a standing Ram Lalla of four or five years of age," he said.

Four prototypes are being created — in dolomite, in marble with a blue tinge, using another stone from Odisha, and using the shaligram. "On January 29, it was decided that the sculptors will see all the four," he said.



The trust has drawn up a schedule to allow darshan in the temple by December.

“The ground floor with garbh griha (sanctum sanctorum) and pranprathista (installation of deity) will be completed except for the iconography. The devotees, hopefully, will have darshan of their lord in the garbh griha, by that date,” Mr. Misra said.

He said Union Home Minister Amit Shah’s declaration that the Ram Temple would be ready to allow darshan on January 1, 2024 was drawn from the Trust’s schedule.

As for the shaligram which has already arrived in India from Nepal, Mr. Misra says that as per Hindu mythology, “shaligram is considered a form of Vishnu” and whether or not the main deity is ultimately carved from that stone, it will be given a space where it can be worshipped.

A suggestion by Prime Minister Narendra Modi is also being incorporated for the idol of the main deity. According to belief, Lord Rama’s birth on Ram Navami occurred at a time when the rays of the sun fell on his forehead, around noon. Mr. Misra said that the Trust has asked an institute of astronomy in Pune to work out a way in which this can be incorporated in the temple.

CLIMATE CHANGE WILL INCREASE HYDROPOWER GENERATION

Unlike coal-powered power plants, hydropower, which is the second highest power producing source at 13%, is a significant contributor to clean global electricity generation. Based on observations and climate projections, a two-member team from IIT Gandhinagar studied the hydroclimatic changes in the catchment areas and their implications for hydropower generation in 46 major dams located in north, central and south India.

The team looked at the increase in rainfall in the catchment areas and the resultant inflow into all the 46 major reservoirs in the near (2021–2040), mid (2041–2060), and far (2081–2100) periods against the reference period (1995–2014) for two shared socioeconomic pathway scenarios — SSP1-2.6 and SSP5-8.5. While SSP1-2.6 is a low-emission scenario, SSP5-8.5 is characterised by high radiative forcing by the end of the 21st century.

Projected increase

“Under warmer climate, we expect hydropower production to increase across the country due to substantial increase in precipitation leading to increased inflow to the reservoirs,” says Dr. Vimal Mishra, professor at the Department of Civil Engineering at IIT Gandhinagar, who led the study. Based on selected hydroelectric dams, the projected increase in hydropower potential in India is 10-23%. The results are published in the journal iScience.

A warmer and wetter climate is projected to bring about 5%-33% increased rainfall. As a result, hydropower production is very likely to increase by 9%-36% for most dams and this will come from increased inflow (7-70%) into the dams. The dams in central India show significant increase compared to dams in north and south India. “But most of the increased inflow into the dams will come from extreme rainfall. And herein lies the risks to water storage in the dams,” Prof. Mishra says.

Due to global warming, there will be a simultaneous rise in extreme inflow and high reservoir storage conditions for most dams. “Our study highlights the high likelihood of increased hydropower generation but the risk comes from very high and sudden inflow due to extreme rainfall, especially when the reservoirs are already full. Any further increase in inflow when the



dams have already reached their maximum storage capacity can pose challenges for reservoir operations,” he says. “Reservoirs can help prevent flooding, but when they are already full and if the inflow is high, then the dams can create a flood-like situation due to sudden water release. Chennai in 2015 and many places in Kerala in 2018 witnessed massive flooding due to heavy inflow into already full reservoirs.”

Compared with central and south India, north India is projected to experience higher warming in the future. As per the study, the highest warming (about 5 degree C) is projected for north India, while the warming is projected to be around 3-4 degree C for central and south India.

Similar to substantial warming, most reservoir catchments are likely to witness increased precipitation due to global warming. “Both north and central India are projected to receive a higher increase in precipitation than south India. The increased precipitation will alter the inflow to the dams more in north and central India than south India and also hydropower generation,” Prof. Mishra says.

The study found that inflow to a few dams in Ganga, Mahanadi, Brahmani, and west-coast river basins is projected to decline in the future. This reduction in inflow is due to increase in atmospheric water demands in response to the considerable warming compared to increase in precipitation.

Timeline of changes

The projected change in hydropower potential is the highest in the far period (-5% to 62.8%) and the lowest for the near period (-6.2% to 39%). “The potential hydropower generation is projected to rise by more than 50% in Tehri, Ramganga, Kadana, Omkareshwar, Maheshwar, and Sriramsagar dams in the far period,” he says. “In the case of south India, eight out of eleven dams are projected to experience a decline in hydropower potential. Dams in central India are projected to experience a more substantial increase in hydropower generation than north and central India.”

Substantial warming projected for north India may reduce snow and glacial storage, reducing snowmelt water contribution in the long run. But a substantial increase in rainfall is more likely to compensate for the reduction from snowmelt in north India.

“Our findings provide crucial insights into projected changes in hydroclimate and hydropower for the major dams in India,” says Prof. Mishra. “India may have to change reservoir rule curves on how much storage should be permitted at different times during the monsoon season.”

RANI, DELHI ZOO’S OLDEST WHITE TIGRESS, DIES

A 17-year-old white tigress at the Delhi zoo died on Monday, officials said.

It was the zoo’s oldest white tigress, according to a communication issued by the zoo director. The tigress, Vina Rani, had been “off-feed” from February 4, the communication said, referring to a loss of appetite.

Blood samples of the tigress were collected on Monday and the blood profile revealed that it was suffering from hepatitis, according to zoo officials. While it was being treated for hepatitis, it succumbed to the disease Monday.



In December last year, one of three white tiger cubs born at the zoo earlier that year died. The tiger cub had been limping and was being treated when it died. While the two other cubs also showed similar symptoms, they are now recovering, according to zoo officials. Samples of the cubs have been sent to test for genetic issues. The cubs had been born at the zoo in August after a period of seven years.

The births in August had taken the number of tigers at the zoo to 11. Of these, seven, including the cubs, were white.

WHY HAVE MANGROVES GOT A BUDGET PUSH?

The story so far:

The Union Budget for 2023-24 announced an initiative for mangrove plantation along the coastline and on salt pan lands, under MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes).

How do mangroves help?

Mangroves are salt-tolerant plant communities found in tropical and subtropical intertidal regions. They are important refuges of coastal biodiversity and also act as bio-shields against extreme climatic events. With the threat of climate change and frequent tropical storms looming large, planting more mangroves is a welcome development for India which has a coastline of about 7,500 km.

Where do mangroves grow in India?

The 'State of World Mangroves 2022' report by the Global Mangrove Alliance puts the total mangrove cover of the world at 1,47,000 sq km (14.7 million hectares). India has about 4,992 sq km (0.49 million hectares) of mangroves, according to the Indian State of Forest Report (IFSR) 2021. Mangroves in India are distributed across nine States and three Union Territories with West Bengal having the highest mangrove cover of 2,114 sq km. The IFSR report also points out that there has been an increase in the mangrove cover from 4,046 sq km in 1987 to 4,992 sq km in 2021. However, like most other countries, in India too the mangrove ecosystem faces constant pressure due to increasing population in coastal areas and the rising demand for land, timber, fodder, fuel-wood and other non-wood forest products like fisheries. The tree species that form a mangrove forest or ecosystem are broadly classified as true mangroves and mangroves associates. True mangroves are the ones which display morphological adaptations for a high saline mangrove ecosystem such as pneumatophores, vivipary or crypto vivipary germination and salt-secreting cells. Botanists put the number of true mangrove species in India at about 42 and mangrove associates at 68. A stable and resilient mangrove ecosystem requires a number of species to exist side by side. Experts believe that trial and testing with field experience and monitoring for years may be required to create a new mangrove ecosystem along the coastline.

What is the ecosystem of these forests?

Mangrove forests are formed when there is intertidal flow and where adequate sediments are available for the trees to set down roots. Experts say aquaculture or fisheries along the coast obstructing tidal flow is one of the biggest threats to the mangrove ecosystem. In the Sundarbans, the largest mangrove forest in the country, several instances of clearing mangroves for fisheries have come to light. Along the country's coastline, land reclamation for agriculture, aquaculture



and industrial activities have occurred in areas which are under the Coastal Regulation Zone. Restoration of the land and allowing intertidal flow is crucial for plantation and survival of mangrove forests.

Which agency will be responsible for it?

The Budget states that MISHTI will be implemented through convergence between the MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme), CAMPA (Compensatory Afforestation Fund Management and Planning Authority) Fund and other sources. Organisations that have been involved in mangrove plantation say that the initiative requires extensive work with local communities. The survival rate of mangrove seed plantation is 50% and of saplings is about 60% and it takes three years for a new plant to stabilise. A contract-based one-time plantation under MGNREGS and CAMPA may not work unless the local communities take ownership of the forests. Discharge of untreated domestic and industrial effluents into the rivers impede the natural inter-tidal flow along the coast and the mixing of freshwater and saline water which help in gradual formation of the mangrove forest.

Why is it crucial for fighting climate change?

The 'State of World Mangroves 2022' points out that mangroves are estimated to hold up to four times the amount of carbon as some other ecosystems. "The loss of even 1% of remaining mangroves could lead to the loss of 0.23 gigatons of CO₂ equivalent, equating to over 520 million barrels of oil," the report states. An initiative like MISHTI is in line with India's Nationally Determined Contributions announced by the Ministry of Environment, Forest and Climate Change to create an additional carbon sink of 2.5-3 billion tonnes of carbon dioxide (CO₂) equivalent, through additional more forest and tree cover by 2030. India joined the Mangrove Alliance for Climate, at the 27th session of the Conference of the Parties in Egypt.

EASING AN ALBATROSS OFF THE NECK OF GREAT INDIAN BUSTARD

Despite a Supreme Court order directing that low-voltage power lines go underground, no significant steps appear to have been taken by power companies and State governments to comply with them, according to the report, which The Hindu has accessed.

The 7,200 km of overhead lines are meant to transfer solar power into the grid, but existing lines have been harming the birds, which have been dying in collision with the lines or from electrocution. Only some 150 of these birds are still left, most of them in Jaisalmer of Rajasthan.

The contention

The death of these birds, and the danger to them from power lines and renewable energy projects, triggered a petition in the Supreme Court in 2019, by environmentalists who demanded that all overhead lines be taken underground.

Private and public power companies, supported by the Union Ministry of New and Renewable Energy (MNRE), contended that shifting all overhead lines underground would be expensive and impractical, and would significantly increase the cost of solar power, undermining India's commitment to green growth.

In April 2021, the court directed that all low-voltage power lines in areas demarcated as "priority and potential habitats of the great Indian bustard" in the Thar and Kutch deserts be pushed



underground. “Priority zones” are areas where the birds are known to live and “potential regions” are those where conservation programmes, such as breeding the birds in captivity, are ongoing.

Bird diverters

High-voltage lines in these zones were also expected to follow suit. However, if power companies found undergrounding technically infeasible, they could approach a Supreme Court-appointed three-member committee for permission to go ahead with overhead lines with modifications.

These modifications include installing “bird diverters”, which are flaps installed on power lines that work like reflectors and are visible to the flying birds from about 50 metres away, giving them a chance to swerve from the path of a power line. Bird diverters are, however, considered to be a stop-gap measure, as they cannot entirely guarantee an end to bird hits.

The SC-appointed committee perused applications for about 3,260 km of prospective power lines in the area of Rajasthan where the endangered birds live, and made decisions on the fate of 2,356 km. The committee ratified plans to build 98% of the length as overhead lines with modifications, and denied ratification of 2% of the line in areas which passed through “priority zones” and where recent bird mortalities have been reported.

The committee also received applications for about 4,132 km of power lines in the endangered bird’s habitats in Gujarat and made decisions on 4,094 km of it. Roughly 82% of the line’s length has been ratified for overhead laying with bird flight diverters, while 18% was not ratified. There are more applications from power companies which are still being scrutinised.

‘Expedite work’

“Given the high mortality risk and recent evidence of two [Great Indian Bustard] mortalities in the Prioritized Area of Rajasthan, and frequent movements of both species of bustards in the Prioritized Area of Gujarat,.. request the Hon’ble SC for necessary directions to concerned agencies for expediting the underground laying of transmission lines inside the Priority Areas of Rajasthan and Gujarat,” said the report submitted on January 16.

The companies which have sent applications for exemptions include both public and private sector power companies.

Only a small proportion of the proposed power lines lay in the priority zone, MNRE Secretary Bhupinder Bhalla told The Hindu. “Bird diverters add only a small cost, but undergrounding is much more expensive. The companies, however, have to comply with the Supreme Court order and while many applications are still pending, I think they should begin installing [bird diverters] very soon,” he said.

**BUSINESS & ECONOMICS****THE TAX GAMBIT**

Much ink has been spilled by now on the Budget's hike in the tax-free ceiling under the new income tax system introduced in 2020, to ₹7 lakh from ₹5 lakh, with lower tax rates for those who give up existing tax exemptions. Experts outline varying arithmetic to determine at what levels of income and savings taxpayers should consider to switch to the new "default" regime. The Opposition has raised concerns that the government eventually wants to do away with the exemptions that "give some social security to the middle class" altogether. Industry captains are worried this may affect the savings rate and hit investments. So far, government mandarins have said, among other things, that the savings rate would not be affected; lower income earners do not save enough to avail the tax exemptions and end up paying higher rates. "As an adult, you have to be the best judge on what suits you," Finance Minister Nirmala Sitharaman summed up on Saturday. All of them are individually valid arguments. However, the bigger picture needs to factor in that many are not in a position to be the best judge for themselves — especially not the lower income earners who the government believes will benefit the most in the new tax system.

India's literacy and financial literacy levels mean many taxpayers cannot deem the right mix of consumption and savings, leave alone directing savings into an appropriate medley of safe as well as inflation-beating investments. Adult humans do not behave as rationally as economists would assume. For instance, there is a propensity towards more conspicuous consumption among the youth who may find the new tax regime with higher take-home salaries alluring. Financial products are routinely mis-sold to those not equipped to understand market nuances and the risks embedded in fine print. In a country that cannot yet provide universal social security and health benefits, the old exemption-based regime helps guide families towards some level of prudent asset allocation to cope with life's uncertainties, with a leg-up for building a critical asset over their working lives — a roof over their head. India's retail participation in stocks may have risen in recent years, but not everyone can handle the risks of equity markets or avoid being conned by influencer-operators. So the nudge away from the old tax regime must be accompanied by greater financial literacy efforts from the government and regulators and a crackdown on unethical selling practices that could lead to people ending up in penury. If people did not need the government's prodding to act in their own best interest, there would have been no need for mandatory contributions to provident funds and pensions.

ANDHRA'S GUARANTEED PENSION SCHEME MODEL CATCHES THE ATTENTION OF CENTRE

WITH at least four Opposition-ruled states reverting to the Old Pension Scheme which offers defined benefits, and the BJP-Sena (Shinde) coalition in Maharashtra not averse to it, senior officials in the Union government are seeing merit in the demands of employees who joined service post January 2004, and are part of the New Pension System where their contributions are defined, but benefits depend on the market.

While no proposal is on the Union Finance Minister's table yet, there are discussions about a new model, which has been proposed by the YS Jagan Mohan Reddy in Andhra Pradesh. What has attracted officials in the Union government about this model is it combines the elements of both the OPS (defined benefit) and the NPS (defined contribution). In doing so, it seeks 'defined contribution' from employees every month and offers two options of 'defined benefit'.



A senior official in the government said, “The core idea of this model is good, but the Andhra government has deliberately understated the rate of return of the NPS.”

So, what is the Jagananna government model? It is attractively called the ‘Guaranteed Pension Scheme’ or the GPS. Employees can get a guaranteed pension of 33 per cent of their last drawn salary if they contribute 10 per cent of their basic salary every month which is matched by a 10 per cent contribution by the state government. They can get a guaranteed pension of 40 per cent of their last drawn salary, if they are willing to contribute a higher 14 per cent of their salary every month, which will be matched by 14 per cent government contribution.

Officials in the state government said the Union Finance Ministry has been sounded out about this model. No formal approval has been sought, since it is not required to. But officials in the Union government said the model “is interesting”, but it needs to be studied in detail.

The Andhra government may be offering many freebies covering every stakeholder community, but it is clear on its assessment of the OPS – that it is not feasible, and it cannot be implemented. In fact, its calculations show that the state’s budget outflow on account of pension and salaries would be Rs 76,590 crore in 2023, and more than double to Rs 1,85,172 crore. If OPS is reintroduced, its impact on future generations will be severe, an official observed.

On the NPS, which the Andhra government refers to as the Contributory Pension Scheme (CPS), it paints a dismal picture of what the employees will get as pension. With bank deposit rates in India exhibiting a declining trend and government yields in Western economies continuously dropping, it claims that employees will draw only 20 per cent of their last drawn salary as monthly pension. Comparing the pension payout under its proposed guaranteed scheme with the CPS, the state further claims its GPS would offer a 70 per cent higher monthly pension.

Why this model resonates

That the old pension scheme is fiscally unsustainable is a fact; parties are not too sure if its good politics either. That’s where the Jagan model is finding resonance: it acknowledges states can’t get back to the old, and yet takes a bold leap that a guarantee, even if not 50 per cent of salary, may be possible.

Officials in the Union government and the Pension Fund Regulatory and Development Authority pointed out that the return under NPS is about 9.5 per cent or so, and that the average monthly pension for government employees under the NPS could be at least 40 per cent of their last drawn salary. “Yes, it may not be 50 per cent guaranteed, but this can be addressed innovatively,” said an official, who did not wish to be named.

The innovation, officials said, could come in the form of the Central government making up for the 10 per cent gap between the returns under NPS and the earlier defined benefit pension scheme or the OPS. “This is a possible solution,” said the official. This may also be possible by increasing the quantum of monthly contribution by the government under the New Pension Scheme.

For instance, the Central government had, with effect from April 1, 2019, hiked its contribution towards pension to 14 per cent of their basic salary from 10 per cent. The contribution by employees remained at 10 per cent only. This was, however, resented by those who joined the government between January 2004 and March 2019 since their pension corpus would not grow as much as for those who joined the government from and after April 1, 2019.



Officials in the Union government said, the Centre can further hike its part of the contribution to the pension fund such that the end benefits come to around 50 per cent of the last drawn salary, assuming returns from NPS of about 9-10 per cent over a 30-year period. "This is all loud thinking now," said another official, and could catch the political leadership's attention close to the Lok Sabha polls.

SAGE STANCE

The Reserve Bank of India's decision to raise its benchmark policy rate yet again, albeit by a smaller quarter percentage point, reflects a welcome resolve in staying committed to ensuring durable price stability. Given that the Monetary Policy Committee's primary mandate is to steer retail inflation towards a 4% target, and that core price gains have stayed stuck above or almost at 6% for 20 months, the rate setting panel voted by a 4-2 majority to continue tightening policy. Governor Shaktikanta Das emphasised the significance of the MPC's unwavering focus on inflation when he noted that medium-term growth prospects would be best strengthened by 'keeping inflation expectations anchored and breaking the persistence of core inflation'. That inflation remains the key risk to the growth outlook, notwithstanding the easing in the headline print for retail price gains over November and December, was stressed by the MPC. The panel pointed to the deflation in vegetable prices in end 2022 and cautioned that this trend could likely dissipate as summer approaches and prices harden. Commodity prices are also expected to see upward pressure globally, given the lifting of most COVID-related restrictions, particularly in China. Specifically, the recent uptrend in Brent futures and the intensifying Ukraine conflict forebodes the possibility that oil costs may well upset the RBI's assumption of an average price of \$95 per barrel for India's crude basket.

The MPC's decision to raise rates by a marginally smaller 25 basis points (bps) this time following its December decision to temper the tightening to 35 bps after three straight half percentage point increases, shows it is cognisant of the growth-retarding challenges that rising credit costs could pose to the ongoing post-pandemic recovery. Still, the fact that the Indian economy has proved more resilient, underpinned by a rebound in domestic demand especially for contact-intensive services and discretionary spending, has provided a degree of comfort to monetary policymakers. This was manifest in their upgrades to the GDP growth forecasts for the first two quarters of the coming fiscal year. While the RBI raised its growth outlook for Q1 FY24 to 7.8%, a sizeable 70 bps up from its projection in December, it lifted its Q2 projection by 30 bps to 6.2%. Mr. Das's unequivocal assertion that monetary policy must be "tailored to ensuring a durable disinflation" rightly echoes a recent blogpost by three IMF economists who warned that central banks need to stay resolute as any 'premature loosening' of policy risks a sharp resurgence in price gains that could leave countries susceptible to further shocks. Ultimately, price stability is and must remain the bedrock for a durable economic recovery.

IS GOVT. ON TRACK ON FISCAL DEFICIT TARGETS?

The story so far:

In the Union Budget for 2023-24, Finance Minister Nirmala Sitharaman chose the path of relative fiscal prudence and projected a decline in fiscal deficit to 5.9% of gross domestic product (GDP) in FY24, compared with 6.4% in FY23. Ms. Sitharaman said the government planned to continue on the path of fiscal consolidation and reach a fiscal deficit below 4.5% by 2025-26. To finance the fiscal deficit in 2023-24, she said the net market borrowings from dated securities are estimated



at ₹11.8 lakh crore, and that the balance financing is expected to come from small savings and other sources. The gross market borrowings are estimated at ₹15.4 lakh crore.

What is the direction on fiscal deficit given in the Budget?

In Union Budget 2023-24, the fiscal deficit to GDP is pegged at 5.9% in FY24. This ratio has declined from 6.4% in 2022-23 (revised estimate) and 6.7% in 2021-22 (actual).

In the revenue budget, the deficit was 4.1% of GDP in 2022-23 (revised estimate). In Union Budget 2023-24, revenue deficit is 2.9% of GDP. If interest payments are deducted from fiscal deficit, which is referred to as primary deficit, it stood at 3% of GDP in 2022-23 (RE).

The primary deficit, which reflects the current fiscal stance devoid of past interest payment liabilities, is pegged at 2.3% of GDP in Union Budget 2023-24.

Are allocations lower for some sectors?

The major allocations that have been pared down are food, fertilizer and petroleum subsidies. The food subsidy in 2022-23 (RE) was ₹2,87,194 crore. In 2023-24, it has been reduced to ₹1,97,350 crore. Similarly, the fertilizer subsidy in 2022-23 was ₹2,25,220 crore (RE); it has been reduced to ₹1,75,100 crore for FY24. The petroleum subsidy in 2022-23 was ₹9,171 crore (RE); it has declined to ₹2,257 crore in 2023-24 (Budget estimate/BE). However, the point to be noted is that compared with BE 2022-23, the decline is not that sharp. In BE 2022-23, food subsidy was ₹2,06,831 crore; fertilizer subsidy was ₹1,05,222 crore, which was less than what has been allocated in BE 2023-24. It is a laudable decision to extend food security to the poor for one more year amid rising inflation. However, rationalisation of subsidies is important so that the government can move towards reaching a fiscal deficit target of 4.5% by 2025-26.

What needs to be done for growth?

Inflation hurts the poor. The interest rate management by the RBI through inflation targeting alone cannot effectively control inflation, given the supply side shocks. Therefore, fiscal policy measures are crucial to tackle mounting inflation. Policy coordination between RBI and North Block is crucial for a sustained growth recovery process. The RBI has been increasing policy rates to tackle mounting inflation. But a high interest rate regime can hurt the economic growth process. So, the fiscal policy needs to remain “accommodative” with focus on gross capital formation in the economy with enhanced capital spending, especially infrastructure investment. In Budget 23-24, capital spending is expected to rise to 3.3% of GDP. The interest-free loan of ₹1.3 lakh crore for 50 years provided to States should help them spend and boost growth.

Ms. Sitharaman stressed that infrastructure investment has a larger multiplier effect on economic growth and employment.

Can the govt. stick to fiscal consolidation?

The Government has not deviated from the path of fiscal consolidation. In Union Budget 2023, the medium-term fiscal consolidation framework stated that there is a need to reduce fiscal deficit-GDP ratio to 4.5% by 2025-26 from the current 6.4%. There are revenue uncertainties in post-pandemic times and also geopolitical risks, mounting inflation, supply chain disruptions and energy price volatility. At the same time, the Government has kept the fiscal policy “accommodative”, and has undertaken capital spending to support economic growth recovery. The predominant mode of financing fiscal deficit in India is through internal market borrowings.



It is also to be financed through securities against small savings, provident funds and an insignificant component of external debt. In Union Budget 2023, India's external debt is pegged at ₹22,118 crore of the total fiscal deficit of ₹17,86,816 crore in 2023-24 (BE), which is approximately about 1%. In Union Budget 2023, it is also stated that the States will have to maintain a fiscal deficit of 3.5% of GSDP of which 0.5% will be tied to power sector reforms.

What are rating agencies saying?

According to Moody's, leveraging buoyant revenue, the Government plans to substantially increase spending on infrastructure, while cutting personal income taxes, and providing capital support for the oil sector. The Budget plans are credit positive for renewable energy companies, cement and steel producers, oil marketing companies and automakers in particular, it said.

While continued gradual fiscal consolidation contributes to the stabilisation of the government's debt burden and supports credit quality, authorities remain unlikely to achieve their ambitious target to narrow the deficit to 4.5% of GDP by FY26, Moody's added. According to Fitch Ratings, the slow fiscal consolidation process in the wake of the pandemic could leave public finances exposed in the event of further major economic shocks.

What lies ahead?

The Finance Minister is focusing on economic growth recovery through capex. She contends that infrastructure investment will boost private investment. In the fiscal deficit-GDP ratio, if the denominator GDP expands, it will reduce the overall fiscal deficit-GDP ratio. Her focus is on economic growth recovery to strengthen GDP.

UNION BUDGET ANNOUNCES RS 2,516 CRORE FOR COMPUTERISATION OF 63,000 PRIMARY AGRICULTURAL CREDIT SOCIETIES: WHAT ARE PACS?

The Union Budget has announced Rs 2,516 crore for computerisation of 63,000 Primary Agricultural Credit Societies (PACS) over the next five years, with the aim of bringing greater transparency and accountability in their operations and enabling them to diversify their business and undertaking more activities.

What are Primary Agricultural Credit Societies (PACS)?

PACS are village level cooperative credit societies that serve as the last link in a three-tier cooperative credit structure headed by the State Cooperative Banks (SCB) at the state level. Credit from the SCBs is transferred to the district central cooperative banks, or DCCBs, that operate at the district level. The DCCBs work with PACS, which deal directly with farmers.

Since these are cooperative bodies, individual farmers are members of the PACS, and office-bearers are elected from within them. A village can have multiple PACS.

PACS are involved in short term lending — or what is known as crop loan. At the start of the cropping cycle, farmers avail credit to finance their requirement of seeds, fertilisers etc. Banks extend this credit at 7 per cent interest, of which 3 per cent is subsidised by the Centre, and 2 per cent by the state government. Effectively, farmers avail the crop loans at 2 per cent interest only.

A report published by the Reserve Bank of India on December 27, 2022 put the number of PACS at 1.02 lakh. At the end of March 2021, only 47,297 of them were in profit. The same report said



PACS had reported lending worth Rs 1,43,044 crore and NPAs of Rs 72,550 crore. Maharashtra has 20,897 PACS of which 11,326 are in losses.

Why are PACS attractive?

The attraction of the PACS lies in the last mile connectivity they offer. For farmers, timely access to capital is necessary at the start of their agricultural activities. PACS have the capacity to extend credit with minimal paperwork within a short time.

With other scheduled commercial banks, farmers have often complained of tedious paperwork and red tape. For farmers, PACS provide strength in numbers, as most of the paperwork is taken care of by the office-bearer of the PACS.

In the case of scheduled commercial banks, farmers have to individually meet the requirement and often have to take the help of agents to get their loans sanctioned. NABARD's annual report of 2021-22 shows that 59.6 per cent of the loans were extended to the small and marginal farmers.

Since PACS are cooperative bodies, however, political compulsions often trump financial discipline, and the recovery of loans is hit. Chairpersons of PACS participate in electing the office-bearers of DCCBs. Political affiliations are important here as well.

Where is computerisation needed?

Dr Hema Yadav, director of Pune-based Vaikunt Mehta National Institute of Cooperative Management pointed out that while SCBs and DCCBs are connected to the Core Banking Software (CBS), PACS are not. Some PACS use their own software, but a compatible platform is necessary to bring about uniformity in the system.

The computerisation of PACS has already been taken up by a few states, including Maharashtra. The Maharashtra State Cooperative Bank has plans to directly lend to PACS in districts where the DCCBs are either financially weak or have lost their banking licence. In such a scenario computerisation of PACS would help.

THE STATUS AND PROCEEDS OF DISINVESTMENT

The story so far:

In the Union Budget for 2023-24, the government has set a disinvestment target of ₹51,000 crore, down nearly 21% from the budget estimate for the current year and just ₹1,000 crore more than the revised estimate. It is also the lowest target in seven years. Moreover, the Centre has not met the disinvestment target for 2022-23 so far, having realised ₹31,106 crore to date, of which, ₹20,516 crore or close to a third of the budgeted estimate came from the IPO of 3.5% of its shares in the Life Insurance Corporation (LIC).

What is disinvestment?

Disinvestment or divestment, in this context, is when the government sells its assets or a subsidiary, such as a Central or State public sector enterprise. Minority disinvestment, majority disinvestment, and complete privatisation are the three main approaches to disinvestment. On fruition of minority disinvestment, the government retains a majority in the company, typically greater than 51%, thus ensuring management control. In the case of majority divestment, the government hands over control to the acquiring entity but retains some stake whereas in



complete privatisation, 100% control of the company is passed on to the buyer. The Union Finance Ministry has a separate department for undertaking disinvestment-related procedures called the Department of Investment and Public Asset Management (DIPAM). The government may disinvest in order to reduce the fiscal burden or bridge the revenue shortfall for that year. It also uses disinvestment proceeds to finance the fiscal deficit, to invest in the economy and development or social sector programmes, and to retire government debt. Disinvestment also encourages private ownership of assets and trading in the open market. If successful, it also means that the government does not have to fund the losses of a loss-making unit anymore. After the the Atal Bihari Vajpayee-led NDA government's privatisation drive, the stock market saw the listing of shares of a bunch of public sector firms. A bold push for disinvestment of the public sector was expected soon after Prime Minister Narendra Modi assumed office in May 2014, announcing that the government had "no business to be in business".

How has disinvestment fared?

To begin with, different central governments over the last three decades have been able to meet annual disinvestment targets only six times. Since coming to power in 2014, the BJP-led NDA government has met (and overachieved) its disinvestment targets twice. In 2017-18, the government earned disinvestment receipts of a little over ₹1 lakh crore as against a target of ₹72,500 crore, and in 2018-19, it brought in ₹94,700 crore when the target was set at ₹80,000 crore. Notably, PRS Legislative Research points out that in recent years, in cases of disinvestment where the government sold more than 51% of its shareholding in Central Public Sector Enterprises (CPSEs), along with a transfer of management control, its stake was sold to another public sector enterprise. Case in point, when the Centre exceeded its target in 2017-18, it earned ₹36,915 crore by selling Hindustan Petroleum Corporation Limited (HPCL) to the state-owned Oil and Natural Gas Corporation (ONGC). Similarly, in 2018-19, REC Limited was sold to the state-owned Power Finance Corporation Limited, through which the government raised ₹14,500 crore. In 2021-22, when Air India was added to the Tata group, the Centre missed its high disinvestment target of ₹1.75 lakh crore by a significant margin, raising just ₹13,534 crore in disinvestment proceeds. In the current year, a third of its budget estimate came from the delayed LIC IPO, which would have happened in the previous year if not for market volatility. The sale of the 52.8% stake in Bharat Petroleum (BPCL) had to be called off in mid-2022 because almost all the bidders had withdrawn. The strategic sale of Central Electronics was also shelved due to lapses in the bidding process and the Pawan Hans stake-sale did not take off as well. While the Neelachal Ispat Nigam Ltd. (NINL) was sold to a steel entity of the Tata group, no sale proceeds accrued to the Centre's exchequer as it held no equity in the company. With ₹31,106 crore in the exchequer as disinvestment proceeds so far, and less than two months remaining in the current fiscal, the government is likely to miss its target.

Which CPSEs are likely to see disinvestment?

The Centre is not going to add new companies to the list of CPSEs to be divested in 2023-24 and the aspirational divestments of two public sector banks and one general insurance firm, announced in the Budget two years ago, will also not be a part of the plan. According to DIPAM, the government has decided to stick to the already-announced and planned privatisation of state-owned companies. Incidentally, the disinvestments of Bharat Petroleum Corporation Limited, SCI, and ConCor had been approved by the government in 2019 but have not gone through yet. Observers point out that disinvestment should ideally be driven by the long-term vision of the government and not by the need to raise revenues. However, of late, the government's reliance on disinvestment proceeds to bridge the gap in the Budget has been increasing. It had introduced a



new disinvestment policy in 2021 to maintain ‘bare minimum’ presence in strategic sectors like atomic energy, defence etc., and exit non-strategic sector enterprises.

ON ADANI AFFAIR, HEAT IN THE HOUSE

It’s been a good couple of days in Parliament. On Tuesday, Congress leader Rahul Gandhi, Bharat Jodo Yatra-returned, gave a 53-minute speech in the House, accusing Prime Minister Narendra Modi and his government of facilitating the steep rise of the house of Adanis. Gandhi’s speech had more fire, less fact. But in as much as it brought an important controversy and issue inside the House, it marked an important moment — for far too long, issues and controversies have either by-passed Parliament or shut it down, they have failed to enter it. On Wednesday, PM Modi, in his reply to the motion of thanks on the President’s address, gave a telling glimpse of how he might frame the impending contest in 2024. Both speeches cleaved much too closely to the persona of the Prime Minister — if Gandhi made him the pointed target of all his allegations, the PM’s response repeatedly invoked the people’s trust in him personally. Both skirted the more institutional and enduring issues of the functioning of market mechanisms and processes of regulation and governance of India’s economy.

PM Modi sought to dismiss the Opposition’s allegations by painting them as the flailing and peevishness of the pessimistic — “nirasha mein doobe hue log”, or those who, in his telling, had repeatedly lost the mandate and have become sore losers who refuse to see the achievements of India and its people, their “aasha” (hope) or “positivity”, under his watch. He painted a picture of stark contrasts — “the lost decade”, 2004-2014, of corruption and unchecked terror strikes and “policy paralysis” vs “India’s decade”. The latter, he said, was led by a stable government armed with a majority, which had made India a place of “nayi sambhavnaayen” new possibilities, and “vaishvik saakh” or global influence. A government that implemented reforms only under compulsion and converted every opportunity into crisis, “mauka” to “museebat”, against a government that reforms by conviction and has given its people an array of firsts, from ensuring the spread of basic services to areas untouched by the state, to propelling the country into the digital age and to the global forefront across sectors and fronts. Most of all, PM Modi sought to disdain criticism as mere allegation, “aarop” not “aalochana”, and cited the public mandate as his weapon and shield, the “suraksha kavach (protective armour)”, as he called it, in the face of the political opponent.

It was a good joust, but an incomplete one. On the day after, despite RBI, Sebi, LIC, SBI and the finance ministry tamping down concerns, many of the key institutional questions raised by the Adani affair remain unaddressed — from the Group’s transparency in share holding to its excess leverage. Both the government and Opposition need to look these unresolved issues in the eye. And should they summon the political will and resolve to dial down the heat and shine more light, they must know that there is no better forum to do this than Parliament.

PARTS OF RAHUL GANDHI’S PARLIAMENTARY SPEECH EXPUNGED: WHAT DOES THIS MEAN AND WHEN DOES THIS HAPPEN?

Expunged portions of the proceedings cease to exist in the records of Parliament, and they can no longer be reported by media houses, even though they may have been heard during the live telecast of the proceedings.



Portions of Congress leader Rahul Gandhi's speech delivered in Lok Sabha on Tuesday (February 7) have been expunged — or removed — from the records of Parliament by the orders of the Speaker.

The expunging of certain words, sentences, or portions of a speech from the records is fairly routine procedure, and is carried out in accordance with laid down rules.

The decision on which parts of the proceedings are to be expunged lies with the Presiding Officer of the House.

What are the rules on expunging from the record?

Under Article 105(2) of the Constitution, "no Member of Parliament shall be liable to any proceedings in any court in respect of anything said...in Parliament or any committee thereof". However, MPs don't enjoy the freedom to say whatever they want inside the House.

The speech of MPs is subject to the discipline of the Rules of Parliament, "good sense" of its Members, and the control of proceedings by the Speaker. These checks ensure that MPs cannot use "defamatory or indecent or undignified or unparliamentary words" inside the House.

Rule 380 ("Expunction") of the Rules of Procedure and Conduct of Business in Lok Sabha says: "If the Speaker is of opinion that words have been used in debate which are defamatory or indecent or unparliamentary or undignified, the Speaker may, while exercising discretion order that such words be expunged from the proceedings of the House."

Rule 381 says: "The portion of the proceedings of the House so expunged shall be marked by asterisks and an explanatory footnote shall be inserted in the proceedings as follows: 'Expunged as ordered by the Chair'."

And what are "unparliamentary" expressions?

Over the years, a huge number of words, both in English and other Indian languages, have been found to be "unparliamentary" by the Presiding Officers — the Speaker of Lok Sabha and Chairperson of Rajya Sabha. These unparliamentary expressions are kept out of Parliament's records.

The Lok Sabha Secretariat has brought out a bulky volume of 'Unparliamentary Expressions'. This book contains words or expressions that would likely be considered rude or offensive in most cultures. But it also contains content that would appear to be fairly harmless and innocuous.

"At the time [the book was first compiled], references were taken from debates and phrases (that had been) declared unparliamentary by the pre-Independence Central Legislative Assembly, Constituent Assembly of India, the Provisional Parliament, the first to the tenth Lok Sabha and Rajya Sabha, state legislatures, and Commonwealth parliaments like that of the United Kingdom," former Lok Sabha Secretary General G C Malhotra had told The Indian Express in 2012.

Malhotra was head of the editorial board of the 2004 edition of the book that ran into 900 pages. State legislatures too are guided mainly by the same book of unparliamentary expressions.

"Depending upon rulings of the Presiding Officers, new words and phrases continue to be added to the list at regular intervals," Malhotra said.



How is the decision to expunge a word (or portion of a speech) taken?

According to K Srinivasan, former director, Lok Sabha Secretariat, “If a member uses a word that could be unparliamentary or indecent and hurts the decorum or dignity of the House, the head of the reporting section sends it to the Speaker or the Presiding Officer citing relevant rules and precedence with a recommendation to expunge them.”

The Speaker has the discretion under Rule 380 to expunge the word or usage. Once the Speaker expunges the word or usage, it comes back to the reporting section which removes the word from the records and mentions in the proceedings as “expunged as ordered by the chair”.

At the end of the session, a compilation of words removed from the records, along with reasons, is sent to the Speaker’s office, Sansad TV, and the editorial service for information.

The context in which a word or sentence is used is key to making the decision on whether to expunge, Srinivasan said. “The focus on expunging a remark is on the context. The context is important. We make it a point to remove the minimum number of words,” he said.

Srinivasan gave the example of the word “Godse”, which was expunged first in 1958 after a member equated Prime Minister Jawaharlal Nehru to Nathuram Godse, and then again in 1962 after another member equated Godse to Swami Vivekananda, but was taken off the list of unparliamentary words by Speaker Sumitra Mahajan in 2015.

“It is contextual,” Srinivasan said. “A member cannot praise Nathuram Godse, but he can say Godse assassinated Mahatma Gandhi.”

What happens after a word has been expunged?

Expunged portions of the proceedings cease to exist in the records of Parliament, and they can no longer be reported by media houses, even though they may have been heard during the live telecast of the proceedings.

However, the proliferation of social media has introduced challenges in the watertight implementation of expunction orders.

“Once the live broadcast (of proceedings) started, whenever such (unparliamentary) words were spoken, they were removed, instead of being replaced; and on the audio files, such words were replaced with a beep,” Srinivasan said.

“If there was an unparliamentary expression that had not been noticed by the Speaker, we (officials) would inform the Chair, and then remove it from the records after getting an order from the Chair,” he said.

REWIND: HOW FINANCE, NITI AAYOG HAD FLAGGED OBJECTIONS BEFORE ADANIS BID, SIX AIRPORT WINS

Rahul Gandhi’s attack in Parliament on the Adani Group’s aviation foray was centred on what he called tweaks in rules to allegedly facilitate the Ahmedabad-based Group’s entry into the sector and allegations of coercion by investigating agencies to force out the operator of the Mumbai airport before it was handed over to the Adanis.



From running a private air-strip at Mundra, the Adani Group's transformation into the country's largest private developer in terms of number of airports handled and the second largest, in terms of passenger traffic, happened over less than 24 months.

The Group's entry into the airports sector came about even as the Union Finance Ministry and the Niti Aayog put on record objections regarding the 2019 airport bidding process that were subsequently overruled, clearing the way for a clean sweep of six airports on offer by the Adani Group.

Before bids were invited for the privatisation of the airports at Ahmedabad, Lucknow, Mangalore, Jaipur, Guwahati and Thiruvananthapuram, the Centre's Public Private Partnership Appraisal Committee (PPPAC) had discussed the Civil Aviation Ministry's proposal for the process on December 11, 2018.

During these discussions, a note from the Department of Economic Affairs, according to the minutes of the meeting, said: "These six airports projects are highly capital-intensive projects, hence it is suggested to incorporate the clause that not more than two airports will be awarded to the same bidder duly factoring the high financial risk and performance issues. Awarding them to different companies would also facilitate yardstick competition." The DEA's note, dated December 10, 2018, to the PPPAC was submitted by a director in the department's PPP cell.

To buttress its argument, the DEA cited the precedent of the Delhi and Mumbai airports, where GMR, despite being the only qualified bidder originally, was not given both the airports. It also referred to the privatisation of Delhi's power distribution, where the city was carved out into three zones and given to two separate companies. At the PPPAC meeting, according to the minutes, there was no discussion on this red flag raised by the DEA.

On the same day as the DEA note, NITI Aayog raised a separate concern regarding the airport bidding. Said a memo prepared by the PPP vertical of the government's key policy think-tank: "A bidder lacking sufficient technical capacity can well jeopardise the project and compromise the quality of services that the government is committed to provide".

In response to this, the PPPAC, chaired by the then DEA Secretary, noted that the EGoS (empowered group of secretaries) had already decided that "Prior airport experience may neither be made a prerequisite for bidding, nor a post-bid requirement. This will enlarge the competition for brownfield airports, which are already functional".

During the bidding process for the six AAI-run airports, the Adani Group outbid its rivals, including experienced players such as GMR Group, Zurich Airport and Cochin International Airport Ltd in addition to other infrastructure players, by a big margin in each of the six bids, thereby winning the rights to operate all six airports for a period of 50 years. This was a departure from the privatisation of Delhi and Mumbai airports, where the concession period was 30 years, in addition to the AAI holding 26% equity in both these airports.

A year after it won the bids for the six airports, the Adani Group signed concession agreements for Ahmedabad, Mangaluru and Lucknow airports in February 2020.

Then in March 2020, the Group invoked a Covid19-linked force majeure to seek a delay until February 2021 in taking over the three airports from AAI, citing difficulties in the transitioning processes, particularly with regard to the airport staff.



The AAI had asked the Group to take over the three airports by November 2020. Three of these six airports — Ahmedabad, Mangaluru and Lucknow — were consequently handed over to the Adani Group in November 2020. The concession agreement for the other three airports — Jaipur, Guwahati and Thiruvananthapuram — were signed between AAI and Adani Group in September 2020.

Just under six months after it sought more time from AAI citing the Covid-19 pandemic, the Adani Group went on to acquire a controlling interest in the country's second largest airport in Mumbai and the upcoming Greenfield airport in Navi Mumbai from the GVK Group.

In the months before the Adani Group's takeover of the Mumbai airport, the GVK Group had signed an agreement with investors, including India's sovereign fund (the NIIF), in October 2019, trying to fend off the Adanis. But in less than a year, on August 31, 2020, the GVK Group signed an agreement to let Adani Enterprises acquire its stake in Mumbai airport and Navi Mumbai airport.

Incidentally, a month before it decided to throw in the towel, the GVK Group had to face the heat from multiple investigative agencies, with the Enforcement Directorate (ED) conducting searches at the offices of GVK Group and the residences of its promoters in Mumbai and Hyderabad, in connection with a money laundering case for alleged irregularities in the development of Mumbai international airport.

On July 7, 2020, the ED had registered a complaint under Section 3 of the Prevention of Money Laundering Act (PMLA) against the GVK Group and its chairman GVK Reddy, his son GV Sanjay Reddy and a few others, based on an FIR filed by CBI against them on June 27. The CBI had also alleged irregularities in the development of Mumbai international airport.

ADANI'S HIGH LEVERAGE HAS COME UNDER LENS, BUT OTHER INDIAN FIRMS NOT FAR BEHIND

The Adani conglomerate may be among the most leveraged groups in India, with promoters and investors pledging shares worth Rs 36,027 crore, but other companies are not far behind. Availing loans through share pledging — especially in a bullish market — is a common practice among promoters and major shareholders in Indian companies for multiple fund requirements, even though the market generally does not positively view high levels of pledged promoter shares.

The Adani group Monday made a prepayment of \$1.114 billion (around Rs 9,215 crore) to release pledged shares in Adani Ports & Special Economic Zone Ltd, Adani Green Energy Ltd and Adani Transmission Ltd, still leaving over shares worth Rs 26,812 crore (based on the market price on February 7) in the pledged category. More than 2.80 crore shares of Adani Enterprises worth Rs 5,045 and 34.31 crore shares of Adani Power worth Rs 5,935 crore remained in the pledged category, according to data from the National Stock Exchange.

The promoters and other investors of various Jindal group companies have also pledged their shares. JSW Steel, controlled by Sajjan Jindal, has reported that 21.49 crore shares worth over Rs 15,353 crore are in the pledged category. Jindal Steel & Power, managed by Naveen Jindal, has 17.09 crore shares worth Rs 9,737 crore in the pledged category, according to NSE data.

The promoters and other major shareholders of the Tata group have pledged shares of as many as 14 group companies. TCS shares worth Rs 9,750 crore and Tata Steel shares worth Rs 3,879 crore are in the pledged category. Promoters and major shareholders of seven companies controlled by various Birla factions have also pledged their shares. Bajaj group promoters and



major shareholders have pledged their share with Bajaj Finserv shares worth Rs 2,418 crore in the pledged category. In the case of Reliance Industries, the topper in market valuation, 5.44 crore shares worth Rs 12,539 crore are in the pledged category. Promoters of 4,455 firms have pledged their shares worth Rs 119,490 crore, according to stock exchange data.

On the pledged figures, an Adani group spokesperson said: "This is an incorrect calculation. Actual pledged loans were 1.9 bn (\$1.9 billion). (Pledge coverage is 2.3x this number not the loan). You refer to pledge coverage. Now pledged loans are less than 1 bn (\$1 billion)."

Banks and finance companies, however, offer funds with an average haircut of 50 per cent to manage the fluctuation in the share prices. This means if a promoter offers shares worth Rs 100 crore at the market price, he/she will likely get around Rs 50-60 crore from the lender. If the share price of the company crashes, the lender will ask for more shares to be pledging or ask him/her to prepay the loan through pledging.

"When the market price (of the pledged shares) falls, the bank gives a day's time to the borrower and asks either to top up the securities so that the margin (the difference between the amount lent and the market value of the shares pledged) remains the same as at the start of the contract, or else the bank will sell the shares. In order to ensure that their shares are not sold in the market, the Adani Group has prepaid \$1.114 billion," said an analyst.

If the group fails to prepay the loans, their lenders will be forced to sell the shares, resulting in more selling pressure in the stocks of its listed companies, he said.

Brokers said the margin in such an arrangement can go as high as 70 per cent depending on the ratings of the company which is taking loans against its shares.

There have been cases of promoters rigging shares to inflate their value and squeeze out more money from lenders.

If the majority owner in a company has pledged a sizable chunk of his or her equity, it could trigger volatile price movement in a falling market. However, if a promoter pledges his stake and takes a loan, that doesn't mean he's facing any financial stress, according to a market source.

According to Pranav Haldea, Managing Director, Prime Database, the market generally does not see companies with high levels of pledged promoter shares in a positive light. "High pledge levels are typically not considered a good sign by the investors as a correction in the market price can potentially lead to the shares being invoked by the lenders and can result in a change in ownership/management," he said.

RBI Governor Shaktikanta Das said banks have robust appraisal mechanisms. When banks lend money, they do not lend on the basis of market capitalisation of that particular company. "Banks lend on basis of the fundamentals of that company," he had said.

According to a Kotak Securities report, shares of companies with high pledging of promoter holding tend to witness volatility. "Pledging of shares by promoters could pose a concern in both, falling or rising market scenarios, when large-scale pledging of promoter equity could pose concerns for retail investors' wealth," the RBI had said. Investors usually look at pledging of shares by promoters before buying stocks.

"Higher the pledging, greater could be the risk of volatility in the company's share price. This is because, as share prices fall, the overall value of the pledged collateral falls. This would put



pressure on the promoter to produce more assets as collateral. Sometimes, the lender may also be forced to sell some of the shares to ensure that the loan does not turn into a bad loan,” said the Kotak report.

WHAT MADE THE ADANI GROUP CALL OFF ITS FPO?

The story so far:

Adani Enterprises last week decided to call off its ₹20,000 crore follow-on public offer and return the money that it had collected from investors. The Adani Group has seen the stocks of its publicly listed companies crash steeply, causing its overall market capitalisation to drop by ₹9.11 lakh crore. A report by U.S. firm Hindenburg Research on January 24 had accused the Adani Group of stock manipulation and accounting fraud. The Group has denied all allegations.

What is a follow-on public offer?

An FPO is a process wherein a company that is already publicly listed in the stock market issues additional shares to investors. During an FPO, a company could decide to issue fresh shares to investors, or existing shareholders in the company could decide to sell their shares to other investors.

An FPO is similar to an initial public offering (IPO), except that an IPO refers to the issuance or sale of shares by a company to investors when it taps into the public market for the very first time. Companies can float an FPO to raise equity capital for various reasons such as to pay off debt or to improve their capital structure.

FPOs can also be a way for existing shareholders to sell their shares and exit the company.

Adani Enterprises, the flagship holding company of the Adani Group, planned to raise ₹20,000 crore through an FPO that closed last week. The FPO suddenly came under scrutiny in the midst of the steep fall in the price of its stock following the release of Hindenburg Research’s report, accusing the Adani Group of several wrongdoings.

There were doubts about whether the shares offered on sale during the FPO would be fully sold as they were priced well above the market price of the company’s stock at the time.

Why did Adani Enterprises call off its FPO and opt to return money to investors?

The FPO floated by Adani Enterprises was fully subscribed, thanks to support from large institutional investors and high networth individuals. The shares were fully subscribed despite the fact that the shares were priced above their public market price. The shares that were allocated to be sold to retail investors and employees of the company, however, were undersubscribed amid the extreme volatility witnessed in the stocks of the Adani Group. Only about 12% and 55% of the shares that were allocated for retail investors and employees, respectively, were sold.

On Wednesday, Gautam Adani, chairman of the Adani Group, decided to call off the FPO and return the money saying that “it will not be morally correct” to accept money from investors in such a volatile environment and expose investors to losses.

Critics of the Adani Group speculated that the FPO that was floated by Adani Enterprises and fully subscribed last week may have been manipulated by the company. They argued that large



investors may have been coaxed into investing in the FPO by the Adani Group to achieve full subscription.

The well-known U.S. billionaire investor and short seller William Ackman also noted that the FPO may have been “rigged”. In particular, critics alleged that Elara Capital (India) Private Limited and Monarch Network Capital, companies which supposedly underwrote the FPO, are shell companies based on their ownership, operations, investment portfolio, and other characteristics. It should be noted that the report released by Hindenburg Research last month had claimed that Elara Capital and Monarch Network Capital were used as shell entities by the Adani Group to manipulate both the stocks as well as the financials of its subsidiaries.

The Adani Group in its reply to the accusation had denied that there were any illegal transactions between the group and the alleged shell entities.

What lies ahead?

The fully subscribed FPO may have helped the Adani Group save face and prevented a complete loss of confidence in the group among investors. A failed FPO would have laid bare the group’s inability to raise capital. However, there are far bigger problems for the Adani Group than just the troubled FPO.

As the precipitous fall in the shares of the Adani Group’s companies shows, investor confidence in the group is at a low right now. Regaining the confidence of investors could turn out to be an uphill task. The loss of investor confidence can make any form of fundraising, be it in the form of equity or debt, hard for the Adani Group going forward. This could affect the group’s ability to roll over its debt and even lead to a larger crisis where it is unable to meet its debt obligations.

Lenders such as Credit Suisse have already stopped accepting bonds of the Adani companies as collateral for their loans. It should be noted that promoters of the various companies that belong to the Adani Group have pledged their shares to borrow money from banks and other entities.

In the case of Adani Power, for instance, as much as 25% of promoter shares have been pledged as collateral to lenders. As the price of the Adani stocks drop, lenders would demand more margin and turn increasingly unwilling to lend any further money to the Adani Group due to the falling value of the collateral.

Many analysts had warned about the risk involved in banks lending huge sums of money against shares since when a company is unable to fulfil its debt obligations its share price also often drops.

The first tranche of payment (worth about \$500 million) of the \$4.5 billion debt that the Adani Group had taken during the acquisition of ACC and Ambuja Cements last year will come due in March.

Given current market conditions, the Adani Group is expected to use cash from within the company and other means to pay or refinance the debt instead of tapping the bond market.

ADANI SAGA WORRIES NEIGHBOURHOOD

Caught between a row over the price of coal and this week’s crash in the share valuations and credit ratings of the Adani Group, a power project being implemented by the firm in Bangladesh, planned as a major Indian infrastructure push to provide electricity, may be delayed by another six months, local reports said.

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The project is one of a number in the neighbourhood — including those in Sri Lanka, Nepal and Myanmar — that have accompanied the Narendra Modi government’s “Neighbourhood First” initiative in the past few years. Highlighting the big-ticket announcements, group chairperson Gautam Adani met with regional leaders, including Bangladesh Prime Minister Sheikh Hasina, in September 2022 and the then Sri Lankan President, Gotabaya Rajapaksa. Adani family members had met with senior officials from Myanmar and even Indonesia.

However, with the group’s slide in fortunes and the cancellation of the Adani Enterprises follow-on public offer, governments in neighbouring countries are watching the company’s market situation closely, even as the External Affairs Ministry made it clear that any setback to projects would not affect ties, emphasising that the Adani stock’s fall was “not a foreign policy issue”.

“If a certain project is not working for financial or economic reasons, I don’t think that is a reflection on the relationship,” Ministry spokesperson Arindam Bagchi said on Thursday.

He was responding to questions about the controversy surrounding an Adani thermal power project in Jharkhand’s Godda, which was due to supply electricity for Bangladesh starting from January 2022, a deadline that has already been breached twice.

According to the United News of Bangladesh’s report quoting government officials (which has not been denied), the Bangladesh Power Development Board (BPDB) has written to Adani Power demanding that it reduce the price of coal to be purchased from Adani’s Carmichael Mines in Australia. At present, Adani Power is reportedly billing Bangladesh \$400 a tonne, far higher than the \$250 a tonne that the BPDB is paying at its other thermal plants.

The Adani Group did not respond to requests for a comment from The Hindu, but it is understood that unless the BPDB sends a demand note for procuring coal, the Godda project transmission will be delayed further.

State officials quoted in a number of local reports say that the project’s prime lenders, State-owned Power Finance Corporation (PFC) and Rural Electrification Corporation (REC), would then have to sign off on the delay.

Other Adani projects in the region have also been in the limelight for various controversies, including in Myanmar, where the group exited the Yangon river port project in 2022 after the threat of U.S. sanctions.

In Sri Lanka, an uproar had followed the leak of a November 2021 letter from the Ceylon Electricity Board’s then-chairman M.M.C. Ferdinando to the Sri Lankan Finance Ministry asking them to allow an Adani proposal for a 500-MW wind energy project off the coast of Mannar, and to treat it as a “proposal from the Government of India to Sri Lanka”. Asked about this during a parliamentary committee meeting, Mr. Ferdinando, who later recanted his words, said he had been summoned by President Gotabaya Rajapaksa who told him that he was under “pressure” from Prime Minister Narendra Modi to okay the Adani proposal.



LIFE & SCIENCE

A NEW KIND OF ICE: 'AMORPHOUS' SOLID, WATER 'FROZEN IN TIME'

Scientists have created a new type of ice that matches the density and structure of water, perhaps opening a door to studying water's mysterious properties.

The ice is called medium-density amorphous ice. The team that created it, led by Alexander Rosu-Finsen at University College London (UCL), shook regular ice in a small container with centimetre-wide stainless-steel balls at temperatures of (-) 200 °C to produce the variant, which has never been seen before. The ice appeared as a white granular powder that stuck to the metal balls.

The findings were published on February 2 in Science ('Medium-density amorphous ice': Rosu-Finsen et al)

Normally, when water freezes, it crystallizes and its molecules are arranged into the familiar hexagonal, solid structure that we call ice. Ice is less dense than its liquid form — an unusual property for a crystal. Depending on conditions such as pressure and the speed of freezing, water can also solidify in any of two dozen other regular arrangements. Amorphous ice is different: it has no such order.

If confirmed, the new form of ice could enable studies of water in a manner that was not possible before.

SCIENTISTS USE OUTER SPACE PARTICLES TO EXAMINE THE FORTRESS WALL OF XI'AN CITY: WHAT ARE MUONS AND HOW ARE THEY USED TO ANALYSE LARGE STRUCTURES?

As per a new study, researchers are examining the fortress wall of Xi'an, an ancient city in China, by using tiny outer space particles that can penetrate hundreds of metres of stone surfaces. Known as muons, these particles have helped them find small density anomalies, which are potential safety hazards, inside the wall.

Published in the Journal of Applied Physics, the study, 'High-precision muography in archaeogeophysics: A case study on Xi'an defensive walls', has been conducted by a team of scientists from Lanzhou University, China, and China Institute of Atomic Energy.

Xi'an's wall is 12 metres high and 18 metres thick. To analyse this 14 kilometres long rampart, researchers deployed a technique called muon tomography or muography, which uses muons to generate three-dimensional images of such large structures.

Although muon tomography was first used in the 1960s, it has only recently found widespread utilisation among researchers, particularly in the field of archaeology.

"With unique advantages, muography has gained increasing attention from archaeologists as a novel and innovative tool to investigate large-scale archaeological sites. This approach may be especially helpful for identifying endangered cultural relics and monuments," scientists said in their study.

What are muons?



Muons are subatomic particles raining from space. They are created when the particles in Earth's atmosphere collide with cosmic rays — clusters of high-energy particles that move through space at just below the speed of light. According to Scientific American magazine, "about 10,000 muons reach every square metre of the Earth's surface a minute".

These particles resemble electrons but are 207 times as massive. Therefore, they are sometimes called "fat electrons". Because muons are so heavy, they can travel through hundreds of metres of rock or other matter before getting absorbed or decaying into electrons and neutrinos, said the journal Science. In comparison, electrons can penetrate through only a few centimetres. Muons are highly unstable and exist for just 2.2 microseconds.

What is muon tomography or muography?

Muography is conceptually similar to X-ray but capable of scanning much larger and wider structures, owing to the penetration power of muons. As these high-energy particles are naturally produced and ubiquitous, all one needs to do is place a muon detector underneath, within or near the object of interest.

The detector then tracks the number of muons going through the object from different directions, to form a three-dimensional image. According to the journal Proceedings of the National Academy of Sciences of the United States of America (PNAS), the image is then "then compared with a muon image of the "free sky." This indicates how many muons have been blocked. The final picture is essentially a shadow of the object, in the light of cosmic muons."

Muons and archaeology

The technique was first used in the late 1960s, when Nobel Laureate and US experimental physicist Luis Alvarez joined hands with Egyptologists to search for hidden chambers in the Pyramid of Khafre, Giza. Nothing was found at the time. However, in 2017, modern archaeologists repeated the experiment with more sophisticated and advanced muon detectors and stumbled upon a major finding.

By placing several detectors in the queen's chamber and in an adjacent corridor within the pyramid and at its base on the north side, the archaeologists were able to discover a previously unknown chamber at least 30 metres long. It was the first major inner structure to be found in the pyramid since the 19th century.

Much like the 2017 experiment, scientists of the latest study also used a muon detector, called CORMIS (Cosmic Ray Muon Imaging System), to examine the wall of Xi'an city. To collect enough data for scanning the whole structure, they deployed six detectors for a week at a time.

"The survey data are carefully processed with advanced statistical methods newly introduced in muography, and the results indicate density anomalies inside the rampart with unprecedented levels of precision", the study said.

Uses of muography beyond archaeology

Apart from archaeology, muography has found use in customs security, internal imaging of volcanoes and others. Around 2015, scientists used the technique to look inside the Fukushima nuclear reactors after the 2011 earthquake and tsunami in Japan. As the site was highly radioactive, they put the two muon detectors in 10 centimetres thick boxes to protect them from radiation and then carried out the scanning.



Muography is also being used by researchers to analyse Mount Vesuvius, a volcano in Italy. According to a 2022 study, with the help of this technique, researchers are trying to understand the finer details of the volcano's internal structure. They hope that the data will play a crucial role in predicting what hazards to expect in an eventual eruption.

CHEMICAL ORIGINS

By analysing meteorites, researchers of Imperial College, London have uncovered the origin of Earth's volatile chemicals. They found that around half the Earth's inventory of zinc came from asteroids originating in the outer Solar System — the part beyond the asteroid belt that includes the planets Jupiter, Saturn, and Uranus. To carry out the study, the researchers examined 18 meteorites of varying origins — eleven from the inner Solar System, known as non-carbonaceous meteorites, and seven from the outer Solar System, known as carbonaceous meteorites. For each meteorite they measured the relative abundances of the five different forms or isotopes of zinc. They then compared each isotopic fingerprint with Earth samples to estimate how much each of these materials contributed to the Earth's zinc inventory. The results suggest that while the Earth only incorporated about 10% of its mass from carbonaceous bodies, this material supplied about half of Earth's zinc.

MICROSOFT BING, OPENAI AND HOW SEARCH IS CHANGING

The future of search will be different. That's what was clear after Microsoft's surprise AI event last night in collaboration with OpenAI, the tech startup behind ChatGPT and Dall-E. At the event, Microsoft announced plans to integrate its Bing search with more artificial intelligence (AI) features, powered by a new and bigger language learning model (LLM) from OpenAI. Based on what Microsoft showcased, Bing search will be more conversational and interactive, almost like a smart AI assistant, rather than just showcasing endless links – which is the case right now. Let's take a look at what Microsoft announced and why this comes at a critical time

What is the new Bing search all about?

Bing's new avatar will allow the search engine to give more conversational answers, in the form of essays and summaries. Yes, it will still show links, but also give a "summarised answer" on the right, which is based on "consolidating reliable sources across the web," according to Microsoft's blog post.

Based on the demos, Bing's new chat experience will also write poems, and stories and even give tips on what to do in a particular city, all designed to make search seem more personalised. But keep in mind this is still a limited release and users have to sign up on the waitlist in order to get access. The Bing search experience once it starts rolling out will be available on the desktop and the respective apps.

So basically Bing search is turning into ChatGPT?

Well not exactly. For one, Microsoft's Bing Search will continue to show links, even in those essay-style answers – the links are shown at the bottom of these answers. ChatGPT does not show links at the moment. But it would be fair to say Bing is getting a lot of help from OpenAI and the large language models (LLM) that helped create ChatGPT.

Microsoft's blog post notes that the LLM powering Bing is bigger than what is being used to run ChatGPT, though exactly how big is not specified. This also means Bing's AI chat will have more

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answers and a larger knowledge pool compared to ChatGPT – where the knowledge is limited to events before 2021.

But Bing’s AI chat experience will certainly make it feel more like ChatGPT. Users will be able to ask “follow-up questions,” as well to their earlier question.

The new AI features also apply what Microsoft is calling a “Prometheus model”. Microsoft calls this a “proprietary way of working with the OpenAI model” that ensures it can utilise these language models in the best possible manner to give “relevant, timely and targeted result...”

What about the accuracy of answers?

Microsoft has cautioned that not all answers will be accurate given these features are still in early preview. Bing search will also let users flag an answer as incorrect if needed which will help in feedback. The company admits that since the answers are based on knowledge from the web, they might not be accurate and have asked users to rely on their own judgement when using these AI-based answers. At the end of the day, many of the AI chat’s responses are based on knowledge which has been sourced from the web, some of which could be wrong.

The post adds that Bing search experience is designed “to keep humans at the centre, and we have developed a safety system that is designed to mitigate failures and avoid misuse with things like content filtering, operational monitoring and abuse detection, and other safeguards.” That’s also why the feature is being rolled out in a phased manner.

So will Bing search finally defeat Google?

It is too early to say, but no doubt Microsoft’s announcement and the viral interest around ChatGPT likely has Google worried. In fact, even Google announced its own rival to ChatGPT called Bard earlier this week. It is also hosting an event on AI in Paris later tonight where it will showcase some new AI products. More details about Bard are also expected at this event. Google has also promised to bring more AI-based features to search.

Still, it is fair to say Microsoft has taken the lead in AI-related developments and its announcement will have big implications for Bing. Bing has never been as popular as Google search – the latter has thoroughly dominated the search market for decades. But with AI-features which give exact, precise and interesting answers, the nature of how people will search is bound to change. And if Bing and OpenAI continue to improve and scale faster, then Google could be in serious trouble.

TURKEY HIT BY SERIES OF POWERFUL EARTHQUAKES: THE SCIENCE BEHIND IT

Turkey has been getting hammered by a series of powerful earthquakes since the early hours of Monday, with the first one, a quake of magnitude 7.8, being described as the strongest the country has experienced in over a century.

Within a span of 12 hours, at least 41 more earthquakes of magnitude 4 or more have been recorded in the same area — southeastern Turkey close to the borders with Syria — according to information on the United States Geological Survey (USGS) website. One of these later earthquakes was as large as the first one, measuring 7.5 in magnitude.

Both Turkey and Syria have been badly affected by the tremors, with news agencies reporting the death of at least 1,700 people by Monday evening. Over 1,000 of these casualties have been reported from Turkey.



As is expected in big earthquakes, aftershocks are likely to continue for the next few days, even weeks.

Turkey and Syria lie in a seismically active region

The region where the earthquake has struck lies along a well known seismic fault line called the Anatolia tectonic block that runs through northern, central, and eastern Turkey.

It is a seismically active zone — though not as active as, say, the Himalayan region which is one of the most dangerous regions in the world from the perspective of earthquakes.

Large earthquakes, of magnitude 5 or higher, have not been very frequent in recent years. According to USGS, only three earthquakes of magnitude 6 or more have happened in the region since 1970. The last major quake in this area came in January 2020.

The seismicity in this region is a result of interactions between the African, Eurasian, and Arabian plates. The Arabian plate is known to be pushing northward, which results in a slight westward movement for the Anatolian plate, where Turkey is located.

The USGS said Monday's earthquake happened around the near-vertical fault line on the eastern Anatolian block, close to the Syrian border.

Do shallow earthquakes cause greater damage?

Monday's earthquakes emerged from relatively shallow depths which made them devastating. The first earthquake, of magnitude 7.8, originated 17.9 km below the Earth's surface. All the subsequent ones, including the one of 7.5 magnitude, emerged from even closer to the surface.

Shallow earthquakes are generally more devastating because they carry greater energy when they emerge on the surface.

Deeper earthquakes lose much of their energy by the time they come to the surface. The deeper quakes spread farther though — the seismic waves move conically upwards to the surface — even as they lose energy while travelling greater distances, and hence cause less damage.

The earthquake in Nepal two weeks ago, whose tremors were felt in many parts of northern India, for example, originated about 25 km below the Earth's surface. It did not cause large scale damage, though one woman was reported to have been killed by a stone that fell from a hill because of the tremors.

But the Nepal earthquake also had a low magnitude of 5.8 — magnitude is the other indicator of how destructive an earthquake will be.

Magnitude is a measure of how big the waves are, while the strength refers to the energy it carries. Magnitude is measured on a logarithmic scale, which means the seismic waves produced by a magnitude 6 earthquake have 10 times higher amplitude than the ones produced by a magnitude 5 earthquake. The energy differential is even higher, 32 times for every change of 1 in magnitude.

This means that the 7.8 magnitude earthquake in Turkey on Monday was 100 times bigger — produced 100 times bigger waves — than the 5.8 earthquake in Nepal, and 1,024 (32 x 32) times more powerful. In general, every change of 0.1 in magnitude results in about 1.4 times change in energy.



Why earthquakes remain unpredictable?

Earthquakes continue to remain the most common natural hazard that cannot be predicted. As such, no early warning systems can be developed.

Theoretically, it is possible to offer a lead time of a few seconds between the time of the origin of the earthquake and the time it reaches the Earth's surface. Seismic waves travel significantly slower than the speed of light — between 5 and 13 km per second. So if the earthquake is detected as soon as it is triggered, information about it can be related a few seconds ahead of it reaching the ground.

Such systems are already in use in some locations to issue alerts about earthquakes. However, these are not predictions. The alerts are issued post-event.

Attempts to find reliable predictors to earthquakes have not been fruitful so far. Scientists have been able to map the areas that are earthquake prone, and are likely to generate earthquakes in future, but there is no way to predict when.

For example, scientists say the Himalayan region has so much accumulated stress beneath the surface that it could result in multiple 7 or 8 magnitude earthquakes. But it cannot be predicted when that would happen.

Between one and three earthquakes of magnitude 8 or above are recorded every year on average, while 10-15 earthquakes of magnitude between 7 and 8 occur.

VOICE DEEPAKES: HOW THEY ARE GENERATED, USED, MISUSED AND DIFFERENTIATED

On January 29, several users of the social media platform 4chan, used “speech synthesis” and “voice cloning” service provider, ElevenLabs, to make voice deepfakes of celebrities like Emma Watson, Joe Rogan, and Ben Shapiro. These deepfake audios made racist, abusive, and violent comments. Making deepfake voices to impersonate others without their consent is a serious concern that could have devastating consequences. In response to such use of their software, ElevenLabs tweeted saying, “While we see our tech being overwhelmingly applied to positive use, we also see an increasing number of voice cloning misuse cases.”

What are voice deepfakes?

A voice deepfake is one that closely mimics a real person's voice. The voice can accurately replicate tonality, accents, cadence, and other unique characteristics of the target person. People use AI and robust computing power to generate such voice clones or synthetic voices. Sometimes it can take weeks to produce such voices, according to Speechify, a text-to-speech conversion app.

How are voice deepfakes created?

To create deepfakes one needs high-end computers with powerful graphics cards, leveraging cloud computing power. Powerful computing hardware can accelerate the process of rendering, which can take hours, days, and even weeks, depending on the process. Besides specialised tools and software, generating deepfakes need training data to be fed to AI models. This data are often original recordings of the target person's voice. AI can use this data to render an authentic-sounding voice, which can then be used to say anything.

What are the threats arising from the use of voice deepfakes?



Attackers are using such technology to defraud users, steal their identity, and to engage in various other illegal activities like phone scams and posting fake videos on social media platforms.

According to one of Speechify's blog posts, back in 2020, a manager from a bank in the UAE, received a phone call from someone he believed was a company director. The manager recognised the voice and authorised a transfer of \$35 million. The manager had no idea that the company director's voice was cloned.

In an other instance, fraudsters used AI to mimic a business owner's voice directing the CEO of a UK-based energy firm to immediately transfer around \$243,000 to the bank account of a Hungarian supplier of the company. The voice belonged to a fraudster who spoofed the CEO, The Wall Street Journal reported in 2019.

Voice deepfakes used in filmmaking have also raised ethical concerns about the use of the technology. Morgan Neville's documentary film on the late legendary chef Anthony Bourdain used voice-cloning software to make Bourdain say words he never spoke. This sparked criticism.

Gathering clear recordings of people's voices is getting easier and can be obtained through recorders, online interviews, and press conferences. Voice capture technology is also improving, making the data fed to AI models more accurate and leading to more believable deepfake voices. This could lead to scarier situations, Speechify highlighted in their blog.

What tools are used for voice cloning?

OpenAI's Vall-e, My Own Voice, Resemble, Descript, ReSpeecher, and iSpeech are some of the tools that can be used in voice cloning. ReSpeecher is the software used by Lucasfilm to create Luke Skywalker's voice in the Mandalorian.

What are the ways to detect voice deepfakes?

Detecting voice deepfakes need highly advanced technologies, software, and hardware to break down speech patterns, background noise, and other elements. Cybersecurity tools have yet to create foolproof ways to detect audio deepfakes, Speechify noted.

Research labs use watermarks and blockchain technologies to detect deepfake technology, but the tech designed to outsmart deepfake detectors is constantly evolving, Norton said in a blog post.

Programmes like Deeptrace are helping to provide protection. Deeptrace uses a combination of antivirus and spam filters that monitor incoming media and quarantine suspicious content, Norton noted.

Last year, researchers at the University of Florida developed a technique to measure acoustic and fluid dynamic differences between original voice samples of humans and those generated synthetically by computers. They estimated the arrangement of the human vocal tract during speech generation and showed that deepfakes often model impossible or highly unlikely anatomical arrangements.

Call centres can also take steps to mitigate the threat from voice deepfakes, according to voice recognition engineers at Pindrop. Callback functions can end suspicious calls and request an outbound call to the account owner for direct confirmation. Multifactor authentication (MFA) and anti-fraud solutions can also reduce deepfake risks. Pindrop mentioned factors like devising call



metadata for ID verification, digital tone analysis, and key-press analysis for behavioural biometrics.

DEER MAY SERVE AS A RESERVOIR FOR OLD SARS-COV-2 VARIANTS

A study has found widespread infection of white-tailed deer with SARS-CoV-2 virus across the U.S. State of New York. The RNA of the virus was detected in 17 of the 2,700 samples (0.6%) collected during September to December 2020, and in 583 of the 2,762 samples (21.1%) collected during September to December 2021. The researchers found cocirculation of the Alpha, Delta, and Gamma variants in the white-tailed deer, months after they were last detected in humans. Of particular concern is the fact that the viral sequences recovered from white-tailed deer were “highly divergent from SARS-CoV-2 sequences recovered from humans”. This implies rapid adaptation of the virus in white-tailed deer.

The study found multiple spillover events from humans to deer of the Alpha and Delta lineages.

While the precise implication of these mutations in enabling the virus to spread between white-tailed deer and from the animals to humans is yet to be determined, the very presence of SARS-CoV-2 variants that is no longer in circulation among humans arises the real possibility of the white-tailed deer serving as reservoir for variant SARS-CoV-2 strains that no longer circulate in the human population. The virus is likely to have jumped from humans to white-tailed deer during feeding or targeted baiting of hunting prey. The results of the study were published in the journal Proceedings of the National Academy of Sciences.

It was already known that the ACE2 of white-tailed deer (WTD) share a high similarity to the human ACE2 receptors and this similarity, it was predicted, will allow the virus to bind and enter the cells of deer. If silico predictions too showed the animals to be highly susceptible to infection by SARS-CoV-2 virus, intranasal inoculation of the virus in white-tailed deer led to infection, replication and shedding of the virus, and eventual transmission from one deer to another. That white-tailed deer is broadly distributed in North America with an estimated 30 million population is a concern if the animal turns out to be a reservoir for the virus.

The researchers confirmed that the virus collected from the deer during 2021 was infectious and active virus replication was proven in laboratory studies. While the Delta variant was found in human samples and coincided with the detection in deer, the Alpha and Gamma variants were rarely in circulation among humans between September and December 2021.

“These observations highlight the need to establish continuous surveillance programs to monitor the circulation, distribution, and evolution of SARS-CoV-2 in White-tailed deer populations and to establish measures to minimise additional virus introductions in animals that may lead to spillback of deer-adapted SARS-CoV-2 variants to humans,” they write.

EXPLAINED: WHY AUSTRALIA HAS KILLED MILLIONS OF BEES TO SAVE ITS HONEY INDUSTRY

In the last two weeks, Australian authorities have exterminated millions of honeybees in a bid to prevent a potentially devastating parasitic plague affecting the southeast region of the country. The recent outbreak of the deadly varroa mite, a sesame seed-sized parasite that was first spotted at a port near Sydney last week, poses a massive threat to the country’s multimillion-dollar honey industry.



Colonies of honeybees have been put under “lockdown” as part of a wide range of biosecurity measures to limit the outbreak. “It is critically important that beekeepers in the Newcastle area do not move any hives or equipment in or out of the area,” said the Australian Honey Bee Industry Council.

Until recently, Australia was one of the few countries that was able to successfully clamp down on the spread of Varroa mite-induced plagues, known to be the biggest threat to bees worldwide. But this time, officials say that the tiny insect is here to stay.

What is the Varroa mite?

The Varroa mite, or Varroa destructor, is a parasitic insect that attacks and feeds on honeybees. Reddish-brown in colour, the tiny pests are known to kill entire colonies of honeybees, officials have warned. They often travel from bee to bee and also via beekeeping equipment, such as combs that have been extracted.

The spread of the mite is largely blamed for a sharp decline in the number of honey bee colonies worldwide. It has plundered bee colonies across the globe.

“Although Varroa mites can feed and live on adult honey bees, they mainly feed and reproduce on larvae and pupae in the developing brood, causing malformation and weakening of honey bees as well as transmitting numerous viruses.”

Over time, as the mite population increases in bee colonies, the symptoms grow more severe. Generally, heavy infestations lead to crippled bees, impaired flight performance, lower rate of return to the colony after foraging and reduced lifespan, Bee Aware states.

What do we know about the Varroa destructor outbreak in Australia?

The mite was first detected last week near the Port of Newcastle, The New York Times reported. Since then, the deadly insects have spread to over 400 different sites and over six million bees have been destroyed to rein in the contagion.

Soon after the Varroa Mite was detected in the country, authorities in New South Wales established strict biosecurity zones, limiting the movement of bees, hives, honey and comb until further notice in the affected areas.

Since then, Australian authorities have identified similar outbreaks in at least nine more locations — one of which was over 378 km away in the city of Dubbo.

While the mites do not feed on Australia’s native bees, several non-native species have been affected. Notably, the country’s honey industry primarily relies on these non-native bees.

Previously, the Australian government has been able to successfully eradicate similar incursions in 2016, 2019 and 2020, according to the Queensland Department of Agriculture and Fisheries.

Presently, the government is struggling to identify the location of all infected hives, Danny Le Feuvre, the acting head of the Australian Honey Bee Industrial Council, told The New York Times.

Why do bees matter?

According to a report by FT, the latest lockdown could adversely impact the growth of several crops — including almonds, macadamia nuts and blueberries — that are dependent on hives for pollination.

The varroa mite infestation comes at a time when the country's agricultural industry is already dealing with a sharp increase in energy prices due to the Russia-Ukraine war, supply-chain issues, bushfires, floods and a recent mouse plague.



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