



CURRENT AFFAIRS FOR UPSC

17TH TO 23RD DECEMBER 2023

DREAMIAS





INTERNATIONAL

DEBARRING DONALD

The Supreme Court of the U.S. State of Colorado has barred former President Donald Trump from running for office again in the 2024 presidential election, on the grounds that he violated a constitutional clause relating to engaging in an “insurrection or rebellion”. The court found, in a 4-3 split decision, that Mr. Trump was not eligible to be on the election ballot next year in Colorado for the role that he played in egging on protesters on January 6, 2021, a section of whom then went on to attack the buildings of the U.S. Capitol in Washington. The ruling sets a historical precedent for the use of Section 3 of the country’s 14th Amendment to strike a presidential candidate off the ballot — in this case the most popular Republican candidate by a significant margin and seen as highly likely to win the election. Under the Section (the “insurrection clause”), any person engaging in insurrection or rebellion against the U.S. Constitution shall not be permitted to run for public office including Congress, the military, and federal and state offices. The 14th Amendment, which was ratified in 1868, was established in part to disallow former Confederates from entering Congress and grabbing power from a government that they had previously fought. It is ironic that a similar post-Civil War logic might apply to Mr. Trump now, for his role in seeking to block the peaceful transfer of power to presidential incumbent, Joe Biden, on unproven allegations of election fraud linked to ballot voting. The Colorado ruling overturned an earlier district court verdict that declined to block Mr. Trump from contesting on the grounds that it was unclear whether the 14th Amendment covered the presidency.

Regardless of whether the inevitable appeal that his legal team will launch will succeed, and regardless of whether his inability to compete in Colorado will impair his overall prospects next year, this ruling marks the bitter polarisation of the U.S. electorate around the controversial policy stances that Mr. Trump represents. On the one hand, it is his very rejection of political propriety that has led to the democracy-threatening situation of a President who came close to refusing to demit office after an election loss. When combined with the hateful, partisan demagoguery of previous Trump campaigns, this calculated stubbornness represents the political outlook of MAGA Republicans, a world view that has little in common with the values that mainstream conservatives and liberals hold dear. This bodes ill for the quality and tenor of democratic discourse ahead, raising the likelihood that leaders on both sides will be talking past each other, instead of reaching out to build bridges for bipartisan cooperation, in short supply at the current juncture.

SISI AGAIN

For Abdel Fattah El-Sisi, the Egyptian President who captured power through a military coup in 2013, winning a reelection was the easy part. In Egypt’s presidential elections, sitting Presidents always win with huge margins. In the December 10-12 elections, Mr. Sisi, a former general, faced three little-known candidates, while his most vocal opponent, Ahmed Tantawy, was barred from contesting. State-affiliated media ran a campaign-like coverage, touting the President’s achievements. Mr. Sisi, unsurprisingly, won 89.6% of the votes, extending his rule to 2030. The tougher part, however, is to govern the most populous Arab country, now struggling with economic and geopolitical crises. When Mr. Sisi toppled Egypt’s first freely elected President, Mohamed Morsi, a Muslim Brotherhood leader, the military’s narrative was that the Brothers had violated the spirit of the 2011 “revolution” that brought down the regime of dictator Hosni Mubarak. But Egypt slid back to the Mubarak years under Mr. Sisi’s rule. The regime, which killed

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hundreds of pro-Brotherhood protesters on August 14, 2013 to restore 'order', has tolerated little criticism and dissent since then. But Mr. Sisi also projected himself as a source of stability and a bulwark against terror, and launched ambitious debt-funded infrastructure projects, including a new desert capital city outside Cairo.

When he starts a new term, what requires Mr. Sisi's attention is the economy. Hyperinflation, at 35%, has already pushed many Egyptians into poverty. External debt stood at \$162.9 billion in December 2022, some 40% of the GDP, according to the central bank. Egypt, which is facing some heavy repayments in 2024, is already in talks with the IMF and other foreign creditors for further assistance. What has made matters worse has been Israel's war on Gaza, which shares a border crossing with Egypt. Pro-Palestine sympathies have historically been high in Egypt, which signed a peace treaty with Israel in 1979. While Israel's relentless bombing pushed thousands to the border, Mr. Sisi tried to walk a fine line: publicly condemning the bombardment and calling for a ceasefire but stopping short of drastic measures that would endanger peace with Israel. Mr. Sisi has also said he would not be complicit with any Israel plan for mass eviction of Palestinians from Gaza. But if the war drags on, he will come under greater pressure to let Palestinian refugees in, which may have economic and political consequences. Between a calamitous war next door and worsening economic conditions at home, his challenge is to offer a stable rule in a country that has seen regime-changing street protests and a coup in the recent past.

WHY HAS HUNGARY BLOCKED EU AID TO UKRAINE?

The story so far:

At a meeting this week, leaders of the European Union (EU) agreed to start negotiations for Ukraine's accession to the EU. Hungary's Prime Minister Viktor Orban, who had vowed to oppose this move, allowed the decision to go through. But he blocked the EU's €50 billion aid package for Ukraine.

What is Hungary's stance on aid to Ukraine?

Prime Minister Orban, a rightwing leader, is a close ally of Russian President Vladimir Putin. In April 2022, after his re-election, he named Ukraine President Volodymyr Zelensky as one of the "opponents" he had to overcome. He believes that the regime in Ukraine is beset by corruption, and that the country is not yet ready for EU membership. He believes Ukraine should first serve as a strategic partner of the EU for some time before membership talks can begin.

He has been opposed to the financial package on the grounds that a non-EU member should not be getting such huge funds at a time when Hungary, an EU member-state, has been denied funds that were specifically allocated for it.

What is the backdrop of the latest move?

The EU had frozen substantial funds earmarked for Hungary, on the grounds that Hungary had violated EU norms on law and order and judicial independence. Analysts believe Hungary has sought to use its veto power on Ukraine's long-term funding as well as formal membership talks as a bargaining chip to get EU to unfreeze these funds. In fact, a day before the summit meeting, the EU released €10 billion of frozen funds to Hungary — a move that was widely seen as a capitulation to Mr. Orban's blackmail. The European Commission, however, has maintained that the timing was a mere coincidence and the funds were released in response to Hungary meeting EU's demands on judicial reforms.



In what is seen by many as a quid pro quo, during the meeting of the 27 EU leaders, Mr. Orban, at the urging of German Chancellor Olaf Scholz, left the room when it was time to raise objections, allowing the remaining 26 to seal the decision on starting official talks on Ukraine's EU accession.

Does this mean Ukraine's EU membership is a done deal?

Not really. Accession to the EU is a long-drawn process, where a country has to fulfil several governance-related and other requirements. If we exclude the six founding members, on an average, it took about nine years for each of the other 21 members to gain membership. Mr. Orban has said that Hungary will have plenty of opportunities to disrupt or even derail Ukraine's membership process.

For Ukraine's membership to go through, it will have to be approved by the Parliaments of all the EU nations, including Hungary's. Mr. Orban seems to have calculated that he doesn't stand to lose much by letting the accession talks begin so long as he can use the leverage afforded by his veto power to extract concessions for Hungary from the EU.

How will the EU now provide aid to Ukraine?

If Mr. Orban does not relent, then the EU could find a way around by creating a trust comprising the other 26 members. This would be a more tedious process and could cause delays in reaching the funds to a desperate Ukraine. Mr. Putin, however, wouldn't mind the delay as Russian forces continue to strengthen their positions at the frontline.

Why is the EU aid package important for Ukraine?

President Zelensky is extremely worried about war fatigue eroding support for Ukraine's resistance to Russia, especially in the U.S. Reports indicate that a substantial number of Republican lawmakers — and their followers — are losing patience with the lack of military successes, and are concerned about funnelling American tax payer dollars into a conflict that is increasingly looking like a war their side cannot win. The Republicans want President Joe Biden to tighten immigration policy in exchange for their support on approving a further \$61 billion of aid to Ukraine.

Presidential elections are due next year, and a victory for Donald Trump and his 'America First' foreign policy could bring an end to the generous U.S. aid for the Ukrainian war effort. This leaves a relatively small window for Mr. Zelensky to not only obtain whatever financial aid he can but also secure binding political support — such as membership of the EU, NATO, and so on — which would more readily translate into financial and military aid.

WHAT LED TO THE COUP ATTEMPT IN SIERRA LEONE?

The story so far:

On November 26, unidentified gunmen targeted the Wilberforce military barracks and several police stations and correctional centres in Freetown, Sierra Leone. The Minister of Information and Civic Education declared the attacks in the capital as an unsuccessful coup attempt to overthrow the government. In August 2023, the Sierra Leone police had arrested several people, including senior military officers who were accused of planning violent attacks on government institutions. The recent attacks were an attempt to free the military officers.



What is happening in Sierra Leone?

Three specific factors play a role in the recent events in Sierra Leone.

First, is the political instability. The political climate in Sierra Leone has been unstable since President Julius Maada Wonie Bio's narrow re-election in June, which was achieved without the need for a run-off election. The outcome was contested by the opposing All People's Congress party, who alleged that the election was manipulated. The opposition boycotted the parliament declaring a policy of non-engagement with the government, with elected members not taking up office at any level of the government until October.

Second comes the economic instability. The country is experiencing a high cost of living crisis and severe poverty. The inflation rate in Sierra Leone went up by 50.94% in August. According to the UN, 59.2% of the population lives in poverty. The youth unemployment rate was 4.15% in 2022. The economic policies of President Bio, worsened the economic crisis, causing the cost of living to escalate. It resulted in violent protests in July and August 2022 demanding the resignation of President Bio. Since his electoral victory five months ago, Mr. Bio has been under scrutiny due to the challenging economic state of the country. Third is the aggression of the police. The prison riot of 2020 in the overcrowded Pademba prison was quelled by using live ammunition. Similarly, the protests of August 2022 left six police officers and 27 protesters dead. Resentment towards the government persists due to the lack of accountability towards protest casualties, as police aggression continues.

What has been the state response?

An indefinite curfew was immediately levied following the attack and was lifted on November 27, only for new curfews to be imposed. The Sierra Leone Civil Aviation Authority (SLCAA) informed airlines to reschedule flights according to the new nationwide curfew. A cash reward has been declared to anyone who could provide details about the coup leaders. President Bio declared that calm had been restored, but shots were fired in Murray town on November 26, amid security operations to capture the leaders of the attack.

Will the ECOWAS intervene?

Since 2020, six African countries have undergone nine coups and coup attempts. Countries including Niger, Guinea, Mali, Burkina Faso, Gabon and Sudan are under military rule. The growing antagonism of people towards democratically elected governments paved the way for the junta to legitimise their takeovers. The Economic Community of West African States' (ECOWAS) intolerance towards unconstitutional takeovers was emphasised when the organisation threatened Niger with military intervention and levied economic sanctions. Sierra Leone is a member country of ECOWAS and hence if any security concern arises in the future, ECOWAS and the member countries will step in to maintain constitutional order. The visit from the ECOWAS' delegates to the country highlights its commitment towards democracy. Sierra Leone is one of the poorest countries in the world and if a coup attempt is successful, the consequent ECOWAS intervention and sanction will be detrimental.

EXPRESS VIEW ON POPE FRANCIS AND SAME-SEX UNIONS: PONTIFF'S BLESSINGS

In 2013, Pope Francis, barely five months into the papacy, answered a reporter's query on homosexuality in a manner very different from the Roman Catholic orthodoxy. "If someone is gay and searches for the Lord... who am I to judge," he said.

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In these 10 years, the pontiff has sought to jump-start discussions on the church's most sensitive topics, none of them as contentious as non-heterosexual unions.

In 2020, he backed same-sex civil unions. The pope has now authorised a major change in the Roman Catholic world by allowing priests to bless same-sex couples.

The order comes with a caveat. Such blessings should not offer the impression of a marriage, the Vatican's doctrinal office said. The Roman Catholic Church teaches that marriage is between man and woman and any sexual relationship outside a marriage is wrong.

How then should one read the pontiff's latest order? Francis has said that the church should oppose laws that criminalise non-heterosexual behaviour — significant because such laws in several parts of the world have clerical support.

At the same time, an increasing number of priests have been working to reconcile the church with civil rights concepts. In 2018, for instance, German bishops reacted to the legalisation of gay marriage in the country by acknowledging that "it is now a political reality".

Francis draws inspiration from within Roman Catholicism — its tradition of compassion. This does create ambiguities — he once described homosexuality as "a sin but not crime". Even then, the pontiff's latest order is probably his strongest message on inclusion.

BHUTAN TO HAVE MASSIVE GREEN CITY ALONG ASSAM BORDER

Bhutan's King Jigme Khesar Namgyel Wangchuck has announced plans to build a massive "international city" along the border with Assam, covering over 1,000 sq. km. The project, known as the 'Gelephu Smartcity Project,' aims to create an economic corridor connecting South Asia with Southeast Asia via India's northeastern states. The project includes the construction of the first India-Bhutan railway line to Gelephu, connecting it with roadways and border-trading points into Assam and West Bengal, with future plans to extend into Myanmar, Thailand, Cambodia, and Singapore.

The Gelephu project is envisioned as a "Special Administrative Region" under different laws to attract international investment. It is expected to follow environmental standards, focus on sustainability, and attract quality investment from screened international companies. The plans include an international airport, zero-emission industries, a "mindfulness city" emphasizing tourism and wellness, and infrastructure development.

The Bhutanese King expressed gratitude to Prime Minister Narendra Modi and the Government of India for their support and commitment to improve major roads and connect border towns with railway lines. The announcement comes after Bhutan was declared no longer a Least Developed Country by the United Nations, despite economic challenges caused by the COVID-19 pandemic, hydropower project debts, and a decline in tourism revenue.

The project has generated anticipation among Bhutanese citizens, with hopes that it will create jobs and contribute to the country's economic growth. The King's speech emphasized the importance of the Gelephu project, describing it as an inflection point and a moment of historical significance for Bhutan. The event was attended by special guests from India and other countries, and the local newspaper highlighted the plan as a "new dawn for Drukylu" (Bhutan).



NATIONAL

MACRON FOR REPUBLIC DAY 2024: HOW INDIA CHOOSES ITS REPUBLIC DAY CHIEF GUEST

France's President Emmanuel Macron has been chosen as the chief guest for India's 2024 Republic Day celebrations. Being invited as the chief guest is a significant honour, symbolizing the highest level of friendship and ties between India and the guest's country. The chief guest participates in various ceremonial activities, including a guard of honour, a reception by the President of India, laying a wreath at Rajghat, banquets, and meetings with top Indian officials.

The process of choosing the chief guest begins around six months before the event, considering factors such as the nature of the relationship between India and the country concerned. Political, commercial, military, and economic interests play a crucial role in the decision, aiming to strengthen ties. Historical associations, such as with the Non-Aligned Movement (NAM), also influence the choice.

After obtaining approval from the Prime Minister and President, the Ministry of External Affairs discreetly checks the availability of potential candidates. The MEA works with Indian ambassadors in the guest's country to finalize details. The planning involves coordination with various government entities and the guest's government.

While preparations are made for contingencies, unexpected issues like health concerns or weather disruptions can arise during the visit. The overall goal is to ensure a successful and smooth visit that fosters good relations and enhances India's image globally.

The visit of the chief guest goes beyond ceremonial aspects, as it can open new possibilities and contribute to furthering India's interests in the world. The hospitality and protocol extended during the visit reflect India's traditions, culture, and history.

WHY HAS A SURVEY BEEN APPROVED AT THE SHAHI IDGAH?

The story so far:

The Shahi Idgah, a three-domed mosque, in Mathura will be surveyed following the decision of the Allahabad High Court which permitted an application seeking appointment of a court commission to inspect the Shahi Idgah mosque that stands adjacent to the Krishna Janmabhoomi temple in Mathura.

What happened?

The order of inspection of the Shahi Idgah was pronounced by Justice Mayank Kumar Jain who maintained that "during the execution of the commission, the sanctity of the campus can be directed to be maintained strictly." The plea for a survey was filed on behalf of the Hindu deity, Shri Krishna and seven others, who in their original suit pending before this court claimed that the mosque was built over the birthplace of Shri Krishna on the orders of Mughal emperor Aurangzeb in 1670. Since the Babri Masjid judgment in 2019, nine cases related to the Shri Krishna Janmabhoomi and Shahi Idgah Masjid, have been filed in the Mathura court. Earlier in May this year, the Allahabad High Court transferred to itself all the suits pending before the Mathura Court on various reliefs pertaining to the Sri Krishna Janmabhoomi-Shahi Idgah Mosque dispute.



What does the Masjid maintain?

The lawyers of the U.P. Sunni Central Waqf Board and the Shahi Idgah Masjid Committee contended in the High Court that “the Shahi Idgah Masjid does not fall within the ambit of 13.37 acres land at Katra Keshav Dev” and that the “place of birth of Lord Krishna does not lie beneath the Mosque. The claim of plaintiffs is based on guess work and is not substantiated by any documentary evidence.” When the Committee of Management Trust of the Shahi Idgah Masjid approached the Supreme Court for a stay on the survey, the apex court did not provide any relief. “At this stage, we will not stay anything. Let him continue. If any adverse order is passed, you can come,” Justice Sanjiv Khanna, presiding over a two-judge Bench, told the mosque’s advocate Huzefa Ahmadi.

What does Places of Worship Act say?

Even as the modalities of the survey are being worked out, the mosque committee maintains that the Places of Worship (Special Provisions) Act, 1991 prohibits changing the character of any place of worship as it existed on August 15, 1947. In 2020, Lucknow-based Vishwa Bhadra Pujari Purohit Mahasangh had filed a petition in the Supreme Court to declare Section 4 of the 1991 Act ultra vires, saying that “the impugned Act has barred the right and remedy against encroachment made on religious property of Hindus exercising might of power by followers of another faith.” The Jamiat Ulama-i-Hind countered, arguing that the Act prohibits conversion of any place of worship, and in so doing, speaks to the future. In the M. Siddiq versus Suresh Das case, popularly called the Babri Masjid-Ramjanmabhoomi verdict, the apex court had held that the Places of Worship Act, imposed a non-derogable obligation towards enforcing our commitment to secularism, under the Constitution.

What is the history of the land?

The survey has been ordered as the Hindu representatives demand complete ownership of the premises where the Keshava Deva temple was destroyed on the orders of Mughal emperor Aurangzeb in 1670. The temple had been built in 1618 during the reign of Aurangzeb’s grandfather Jahangir by Bir Singh Bundela. The temple had been patronised by Aurangzeb’s brother and rival for the Mughal throne, Dara Shukoh. Later, in 1815, Raja Patni Mal of Benaras bought the 13.77 acre-land from the East India Company. His descendants sold the land to Jugal Kishore Birla for ₹13,400, who then set up the Shri Krishna Janmabhoomi Trust. It acquired ownership rights over the temple and in 1951, the 13.77 acre-land was placed in the trust, with the condition that the “trust property will never be sold or pledged.” In 1968, an agreement was signed between the Sri Krishna Janmasthan Seva Sangh and the Shahi Idgah Masjid Trust. As part of the settlement, the temple authority had conceded a portion of the land to the Idgah. Now, the temple petitioners want possession of the entire parcel of the land.

NOT FASTING ON KARVA CHAETH IS NOT AN ACT OF CRUELTY: HC

The High Court has observed that not fasting on the festival of Karva Chauth may be the wife’s choice, and if “dispassionately considered”, may not be termed as an act of cruelty grave enough to sever marital ties. “Having different religious beliefs and not performing certain religious duties per se would not amount to cruelty and would not be sufficient to sever marital ties,” the court remarked while hearing a divorce case. The observation came even as the High Court upheld the decision of a family court granting divorce to the husband on the grounds of cruelty by the wife.



In this case, the husband sought a divorce, claiming that his wife was “indifferent” and uninterested in discharging matrimonial obligations. Meanwhile, the wife claimed that on the couple’s first Karva Chauth in 2009, she was “annoyed” with her husband for not recharging her mobile phone and so decided not to keep a fast.

INSIDE INDIA’S QUEER FESTIVALS

Queer festivals in India, such as the Rainbow Literature Festival, KASHISH International Queer Film Festival, Queer LitFest in Chennai, Awadh Queer Literature Festival, and DIALOGUES: Calcutta International LGBTQIA+ Film and Video Festival, provide spaces for the LGBTQIA+ community to discuss gender, sexuality, society, and literature. These festivals serve as platforms to showcase queer art and artists, building communities where individuals can connect with like-minded people, discover support groups, and engage in discussions without fear of judgment.

The online space has played a significant role in connecting queer voices and groups, but the importance of physical spaces is highlighted, especially in the wake of online bullying and mental health concerns. The festivals offer opportunities for awareness, education, and creating a sense of community beyond the digital realm.

Despite the challenges of funding, many festivals rely on crowdfunding campaigns and community support to sustain their events. Some organizations, like Sappho for Equality, choose not to accept money from corporations to maintain freedom and flexibility. The festivals aim to be inclusive, diverse, and provide safe spaces for queer individuals to freely express themselves.

The growing participation in these festivals includes not only queer individuals but also parents seeking to understand the LGBTQIA+ community better. The events contribute to a better understanding of diverse identities, fostering acceptance and support.

EXPRESS VIEW ON WFI ELECTIONS: STRANGLEHOLD OF BRIJ BHUSHAN SINGH

On the face of it, the Wrestling Federation of India (WFI) elections were held in a free and fair manner. There was a process put in place, all those eligible could cast their votes and the candidate with the majority on his side was triumphant. Yet, there was one frame that captured everything that was problematic about this process. It was of a heavily garlanded Brij Bhushan Sharan Singh, charged with sexual harassment, posing for the cameras and flashing the victory sign whereas the man who won the election, Sanjay Singh, standing obediently next to him. Though Brij Bhushan’s term as WFI office-bearer was over, there was no doubt who was the actual winner and who was calling the shots in Indian wrestling. The sloganeering at Brij Bhushan’s residence – dabdaba toh tha, dabdaba toh rahega (we dominated, we will continue to dominate) – by his supporters indicated as much.

Many puzzling trends emerge from the poll results. ID Nanavati, a senior sports administrator and a staunch Brij Bhushan loyalist, mysteriously lost to a little-known hotelier Devender Kadiyan from Haryana, representing Assam in the polls, for the post of senior vice-president. There’s also the case of a bureaucrat, Prem Chand Lochab, contesting an election for the first time but walking away with one of the most coveted posts of secretary-general. Then there is Madhya Pradesh’s newly elected Chief Minister Mohan Yadav. Contesting for the post of vice-president from Brij Bhushan camp, he got just 5 votes. For any election, such contrasting fortunes for officials from the same panel, this was a suspicious pattern.



Sanjay Singh's elevation from being a virtual nobody in Indian wrestling to the position of president raises many questions. It is concerning that a body reeling from sexual harassment allegations against its former chief will have no woman member in the new committee. With the former Commonwealth Games gold medalist and presidential candidate, Anita Sheoran, managing just 7 votes it showed that former players would always find it tough to break into sports bodies. The result also showed how tough it is to force reforms in a federation that is controlled by a powerful politician. Brij Bhushan's time as the WFI chief was up even before he was accused of harassment and intimidation. He had served his maximum tenure and the ideal thing would have been for him to step aside and let someone else with fresh ideas take over. Instead, he will carry on pulling the strings and influencing decisions. Sanjay Singh cites his experience of playing in, and organising, mud wrestling tournaments. But this is not a dangal. India has the talent and potential to do well in modern wrestling. The new chief needs to do a lot to show that he's independent and also the right man for the job. Shifting the WFI office out of Brij Bhushan's residence in New Delhi could be a good start.

LEGISLATIVE DECLINE

Both the security breach in Parliament last week featuring a theatrical attempt by individuals to highlight an issue of public importance — unemployment — and the Union government's response have been deeply problematic. The government's stymieing of any debate over this issue in Parliament and the Chair's recourse to an unprecedented high number of suspensions of Opposition legislators following their demand for a statement in the Houses and a debate, have been in line with its disregard for deliberative democracy. As many as 78 Opposition Members of Parliament were suspended on Monday. Fourteen more were suspended earlier — 92 in total, and nearly matching the 94 suspensions overall since 2014 prior to this session. Unlike in the two Lok Sabhas (2004-14), when even ruling party legislators, including rebels, were suspended for unruliness, only Opposition members have been subject to suspension, which includes those for far less severe offences since 2014.

The hallmark of a functioning democracy is deliberation, wherein elected legislators debate and discuss issues of public import and seek solutions to issues that affect citizens. A thorough deliberation involves not just televised speeches from Parliament but also debates, the utilisation of parliamentary and standing committees to delve into the issue and for Bills and legislation to be discussed threadbare before consideration. Instead, over the course of recent parliamentary sessions during the National Democratic Alliance's tenure, there have been multiple attempts at browbeating the Opposition, getting Bills passed without adequate discussion, disallowing amendments on merit, and under-utilising standing and parliamentary committees while trying hard to play to the gallery. Legislative business and parliamentary work have been given short shrift, while theatrics by legislators in both the Treasury and Opposition benches, and one-upmanship through the use of suspensions, have dominated proceedings. It is no wonder that such actions have compelled global democracy reports by research institutions such as V-Dem Institute to characterise India's democracy as an "electoral autocracy". Worse, the use of the draconian Unlawful Activities (Prevention) Act to indiscriminately target dissenters, such as the protesters who threw canisters and raised slogans in Parliament last week, has also fallen into the recent pattern of a deliberate equation of dissent with terror. Again, this has led the U.S.-based Freedom House, that measures civil and political liberties, to declare India as "partially free". The recent actions by the government only contribute further to the backsliding of democracy in India, making these developments a matter of serious concern.



NEW RECORD SET WITH THE SUSPENSION OF 141 MPS IN A SINGLE SESSION

Ninety-five MPs from the Lok Sabha and 46 MPs from the Rajya Sabha have been suspended during the ongoing winter session of Parliament. This is the highest number of MPs suspended in a single session in the history of Parliament. The record number was due to the Opposition's demand for a statement from the Home Minister over the security breach in Parliament. Commenting on the suspensions, Congress president Mallikarjun Kharge accused the government of attacking Parliament and democracy.

The highest number of MPs suspended from the Lok Sabha was previously 63 (during the Eighth Lok Sabha, on March 15, 1989, when Rajiv Gandhi was the Prime Minister). According to The Hindu archives, the entire Opposition was suspended due to its demand that the government discuss the Thakkar Commission report on the assassination of Indira Gandhi. That evening, Janata Dal leader V.P. Singh spoke to the media and accused the government of acting in a "brazen" fashion.

Lok Sabha MPs.

Twenty-nine MPs from Tamil Nadu were suspended, the highest number across all States, which left just 10 MPs to represent the people of the State in the Lok Sabha for the remaining days of the session. Sixteen MPs from Kerala were suspended, leaving just four MPs, and 14 from West Bengal were suspended, leaving just 27 MPs. A lone MP from Puducherry was also on the suspension list, which leaves the Union Territory without any representation. This is the case with Lakshadweep, too.

Thirty-eight MPs from the Congress were suspended, the highest number across all parties, which leaves just 10 Congress MPs in the Lok Sabha. Sixteen MPs from the Dravida Munnetra Kazhagam (DMK) and 13 from the All India Trinamool Congress (AITC) were suspended, leaving eight and nine MPs from each party in the Lok Sabha, respectively. All the three MPs belonging to the Indian Union Muslim League (IUML) were suspended. The Viduthalai Chiruthaigal Katchi (VCK), the Revolutionary Socialist Party (RSP), and the Aam Aadmi Party (AAP) were also left without an MP in the Lok Sabha as their lone MPs were suspended.

Rajya Sabha MPs.

Eight MPs from West Bengal were suspended, the highest number across all States, which left a similar number to represent the people of the State in the Rajya Sabha. Seven MPs from Kerala and five from Tamil Nadu were suspended.

Eighteen MPs from the Congress were suspended, the highest number across all parties, which left just 12 in the Rajya Sabha. Eight MPs from AITC and five from the DMK were suspended. Both the MPs from the Communist Party of India (CPI) and the lone MP from Kerala Congress (M) were suspended leaving the parties without an MP in the Rajya Sabha.

The above calculations are based on the list of sitting MPs available in the Lok Sabha and Rajya Sabha website as on Tuesday.

Only sessions during which at least one MP was suspended are depicted. Under UPA-I and II, 50 MPs were suspended; 189 MPs were suspended during NDA-I and II.



Seven members were suspended from the Rajya Sabha under UPA-I and II compared to the 94 members under NDA-I and II.

REVISION SANS VISION

Law-making in the absence of a significant number of Opposition members does not reflect well on the legislature. The three Bills that replace the body of criminal laws in India were passed by Parliament in its ongoing session in the absence of more than 140 members. Even though the revised versions of the Bharatiya Nyaya Sanhita (BNS, which will replace the IPC), the Bharatiya Nagarik Suraksha Sanhita (which will replace the CrPC) and the Bharatiya Sakshya Bill (instead of the Evidence Act) were introduced after scrutiny by a Parliamentary Standing Committee, they still required legislative deliberations in the full chambers, given their implications for the entire country. Many concerns that the Bills gave rise to could not be raised in Parliament as a result. A conspicuous aspect of the new codes is that barring reordering of the sections, much of the language and contents of the original laws have been retained. However, Union Home Minister Amit Shah's claim that the colonial imprint of the IPC, CrPC and the Evidence Act has been replaced by a purely Indian legal framework may not be correct, as the new codes do not envisage any path-breaking change in the way the country is policed, crimes are investigated and protracted trials are conducted.

The improvements in the BNS include the removal of the outdated sedition section, as exciting disaffection against the government or bringing it into hatred and contempt is no more an offence, and the introduction of mob lynching (including hate crimes such as causing death or grievous hurt on the ground of a person's race, caste, community, sex, language or place of birth) as a separate offence. Another positive feature is the government ignoring the panel's recommendation to bring back adultery, struck down by the Supreme Court, as a gender-neutral offence. However, it is questionable whether 'terrorism' should have been included in the general penal law when it is punishable under special legislation. Grave charges such as terrorism should not be lightly invoked. On the procedural side, some welcome features are the provision for FIRs to be registered by a police officer irrespective of where an offence took place and the boost sought to be given to use of forensics in investigation and videography of searches and seizures. A significant failure lies in not clarifying whether the new criminal procedure allows police custody beyond the 15-day limit, or it is just a provision that allows the 15-day period to spread across any days within the first 40 or 60 days of a person's arrest. Revisions in law cannot be made without a vision for a legal framework that addresses all the inadequacies of the criminal justice system.

ANALYSING THE POST OFFICE BILL, 2023

The story so far:

On December 18, the Parliament passed the Post Office Bill, 2023, that seeks to replace the colonial-era Indian Post Office Act, 1898. According to the government, the legislation is an attempt to ensure the effective functioning of the Postal Department as a messenger service and as a provider of banking facilities.

What are the key features of the Bill?

The Post Office Bill, 2023 allows the interception of articles transmitted via post on grounds such as the security of the state, friendly relations with foreign states, public order, emergency, public



safety, or contravention of the provisions of the Bill or any other laws. The officer-in-charge appointed by the Union government is empowered to 'intercept, open or detain' any postal article on the aforementioned grounds. Such an item can also be disposed of by the government in a manner it deems appropriate. The Union government by notification can also empower any officer of the Post Office to deliver a postal article suspected of containing any prohibited item to the customs authority or any other specified authority.

The Bill exempts the Post Office from incurring any liability pertaining to its services. It specifically stipulates that no officer shall incur any liability unless the officer has acted fraudulently, or wilfully caused any loss, delay, or mis-delivery of service. There are also no offences and penalties specified under the Bill except one: amounts not paid by a user will be recoverable as arrears of land revenue. The 1898 Act contained offences such as theft, misappropriation, or destruction of postal articles which are punishable with imprisonment up to seven years and a fine. However, such offences and penalties were subsequently removed by the Jan Vishwas (Amendment of Provisions) Act, 2023.

What were the concerns raised?

Shaktisinh Gohil of the Indian National Congress (INC) said that the Bill violates the fundamental right to privacy. "Right to Privacy is a fundamental right. I know that security is important and that you're doing this to protect people. But in the name of security, we have all seen recently how a company renowned globally for its hard-to-intercept software warned that 'state-sponsored hackers are trying to hack your mobile.' We MPs also got this message." The parliamentarian was referring to the recent email alerts received by several Opposition leaders and journalists from U.S.-based tech giant Apple informing them that their digital devices were being targeted by "state-sponsored attackers." Similarly, P. Wilson of the Dravida Munnetra Kazhagam (DMK) underscored that the Bill, in the absence of guidelines, encourages state surveillance and violates Articles 14, 19(1)(a), and Article 21 of the Constitution. He also flagged how a post officer can be empowered to exercise search and seizure powers. "By granting such powers, the privacy of all the citizens who use the services of Indian Post is severely compromised since there is no provision in the Bill which injuncts the officer from leaking any contents of the intercepted postal articles," Mr. Wilson said.

Similarly, Raghav Chaddha of the Aam Admi Party (AAP) said that the Bill suffers from "Big Brother syndrome" and allows the government to monitor citizens.

The Opposition leaders also pointed out that the law does not clarify the grounds for interception. For instance, it does not stipulate what would qualify as an 'emergency' — a ground for interception under Section 9(i) of the Bill. Sukhendu Sekhar Ray of the All India Trinamool Congress (AITC) called the clause "absolutely vague" and pointed out that it gives unbridled powers to the authorities concerned. Mr. Ray also pointed out that the Bill fails to specify the procedure for interception, thus making it arbitrary in nature. Referring to the provision stating that 'interceptions may be carried out by the Union Government, State Governments, or any officer specially authorised by them', several MPs raised concerns that it does not provide clarity on how these officers will be selected, especially since they have been empowered to 'open and detain' any intercepted shipment.

Congress MP Shashi Tharoor pointed out in the Lok Sabha that the Bill does not provide any grievance redressal mechanism to citizens despite relieving post officers of any liability with regard to the services offered. Referring to Section 9 of the Bill that permits interception, Mr.



Tharoor underscored that there is no clause in the legislation asking the government to inform a citizen about such actions, and thus a citizen will be unable to raise concerns of interception or contest the action. This violates “every principle of natural justice and due process of law”, he added.

Ashwini Vaishnaw, Union Minister of Communications and Information and Broadcasting stressed that owing to India’s complex and diverse society, it is “very important that interception is done and this kind of a provision is kept in the law for purposes of national security.” He also clarified that the government will soon frame rules containing the procedure for interception and that such a procedure will be fair and transparent.

What has been the history of the Bill?

Similar to the ground of ‘emergency’ under the Bill, the 1898 Act permits interception on grounds of ‘public emergency’. While examining the Act, the Law Commission of India in its 38th report pointed out that since the term ‘emergency’ has not been explicitly defined, it provides a wide ground for interception. It also flagged that since the term has not been defined in the Constitution, it cannot serve as a reasonable ground for suspension of fundamental rights under Article 19(1). The Commission highlighted that a state of public emergency must be such that it is not secretive and is apparent to a reasonable man. Accordingly, it recommended that the legislature should amend the existing laws relating to interception to ensure that they adhere to the Constitution. This led to the enactment of the Telegraph (Amendment) Act of 1981.

A provision permitting interception was introduced earlier in the Indian Post Office (Amendment) Bill, 1986. It empowered the Union Government or the State Government or any authorised officer to ‘intercept or detain’ any postal article on the following grounds — public safety or tranquillity, the sovereignty, and integrity of India, the security of the state, friendly relations with foreign states, public order, for preventing incitement to the commission of any offence, or on the occurrence of any public emergency. While the Bill was passed by both Houses, former President Zail Singh neither assented nor returned the Bill to the Parliament for reconsideration (he demitted office in July 1987). As a result, the legislation remained in limbo and was withdrawn by the Vajpayee government in 2002.

What are the relevant Supreme Court rulings?

In the People’s Union for Civil Liberties (PUCL) versus Union of India (1996), the constitutionality of Section 5(2) of the Telegraph Act was challenged for permitting telephonic interception without any due process guarantees. The Supreme Court acknowledged that telephone tapping infringed upon the fundamental right to privacy, and created safeguards against arbitrariness in the exercise of the state’s surveillance powers. It underscored that in the absence of a just and fair procedure to regulate the powers of interception, it is not possible to safeguard the rights of citizens under Articles 19(1)(a) and Article 21.

In the landmark verdict Justice KS Puttaswamy versus Union of India (2017), the Supreme Court unanimously declared the right to privacy to be a fundamental right of all Indians. The verdict stipulated that any state measure that proposes to interfere with the right to privacy must satisfy certain requirements — (i) legality, the measure is authorised by statute; (ii) legitimate goal, the measure pursues a proper purpose; (iii) suitability, the measure takes meaningful steps towards achieving the proper purpose; (iv) necessity, the measure is the least rights-restrictive measure amongst equally effective alternatives; (v) proportionality, the measure does not disproportionately impact individual rights; and (vi) procedural safeguards, the measure



incorporates meaningful guardrails against possible abuse. Additionally, the Court had opined with respect to the Pegasus spyware scandal that the state did not get “a free pass every time the spectre of national security is raised... National security cannot be the bugbear that the judiciary shies away from, by virtue of its mere mentioning.”

What have experts said?

“There is an absolute lack of safeguards under this Bill. It is not as if the Union government cannot have the power to notify a person to inspect, intercept, open, or detain a postal item. The issue is that there is a lack of the usual requirements that accompany such interception orders such as reasons to be recorded in writing — why is it being done? There needs to be a justifiable reason”, says Apar Gupta, lawyer and founding director of Internet Freedom Foundation (IFF).

Highlighting how the Bill encourages state surveillance, he asserts, “We must also remember that the issue is that the interception provision is tied to the provision of services and these services include citizen delivery services. For instance, people who need to enroll for electoral cards or obtain police verification will avail of such postal services. So there is a possibility of state surveillance because there are no safeguards at all — even orders in writing are not needed any longer.”

INCOMING CALL

The introduction of the Telecommunications Bill, 2023, inches closer to achieving the Union government’s long-standing aim of consolidating the law for wireless networks and Internet service providers, with a 46-page statute that leaves existing regulatory structures largely intact, while simplifying bureaucratic procedures such as applying for licences and permits for telecom operators. Licensing processes are set to be digitised, and telecom operators will have a new way of dealing with non-compliance with their licence terms, while also having access to district- and State-level authorities for permissions and dispute resolution when setting up their equipment and optical fiber networks on public and private properties. The Bill also lets the satellite Internet industry — long touted as a way for at least some remote areas to get net connectivity — breathe a sigh of relief, as there is clarity that it will not need to bid for spectrum, thus putting India on similar footing with other countries. The Bill has been welcomed by industry bodies for streamlining their regulatory landscape and promoting their ease of doing business, and could possibly give the much-needed regulatory stability and enabling environment for the next phase of telecom expansion. Over half of India’s population is on the margins of the connected world, and the Bill could help.

But issues persist: the expansive definition of telecom brings in its ambit a range of services, and state authority over them raises concerns of privacy and surveillance. These concerns are not merely academic considering past allegations of state-sponsored snooping. The Bill tries to deal with spamming concerns, but its proposed solutions require additional compromises to privacy. The issues of surveillance reform and Internet shutdowns have massive implications, and must not be avoided just because they are contentious. The government must address these concerns with an open mind, considering the vast powers that the text of the Bill grants it. When the last draft was publicly floated for consultation, responses from industry bodies and the public were withheld from scrutiny. To further reassure the public of its clean motives, the government must scrupulously conduct rule-making with absolute transparency and consultation. This is especially important as many of the Act’s provisions need subordinate legislation notified by the Department of Telecommunications before they come into force. The telecommunications landscape has



evolved dramatically since the Telegraph Act was first passed in the 19th century, and regulation and lawmaking of the Internet world need to comprehensively address all the issues that have come with this digital explosion.

LOK SABHA PASSES BILL ON CEC, EC APPOINTMENT

The Lok Sabha on Thursday passed the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023 amid the scarce presence of Opposition members in the House.

The Bill had been passed by the Rajya Sabha on December 12.

Speaking during a debate before the passage of the Bill, Law Minister Arjun Ram Meghwal said the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 did not have a clause related to the appointment of CEC and other ECs.

Search, selection panel

Mr. Meghwal said the names of the commissioners were so far decided by the government, but from now on a search and selection committee will overlook the process. He also asserted that this was in line with the Supreme Court's directions, adding that the committee mentioned in its judgment was a "stop-gap" arrangement.

Earlier in March this year, the Supreme Court had ruled that the selection panel should comprise the Prime Minister, the LoP in the Lok Sabha, and the Chief Justice of India. The court had said the order would hold good until a law was made by Parliament. Mr. Meghwal, in his address, said that the committee mentioned in the Supreme Court judgment was a "stop-gap" arrangement.

Till the Supreme Court ruling, Election Commissioners and Chief Election Commissioners (CECs) had been appointed by the President after recommendations by the government.

According to the Bill, the search committee, headed by the Law Minister and comprising two Union Secretaries, will shortlist five names for consideration of the selection committee for appointment as the CEC and ECs.

The selection committee, which would be headed by the Prime Minister and comprise a Union Minister nominated by the Prime Minister, and the leader of the Opposition (LoP) in the Lok Sabha, will select members of the Election Commission.

In case there is no LoP in the Lower House, the leader of the single largest Opposition party in the Lok Sabha will be deemed to be the LoP.

The selection panel will have the power to consider even those not shortlisted by the search committee. A vacancy will arise in the poll panel when Election Commissioner Anup Chandra Pandey demits office on February 14 next year.



NEW ORDER

By elevating debutant Member of the Legislative Assembly Bhajan Lal Sharma as the Chief Minister of Rajasthan, the Bharatiya Janata Party (BJP) has sought to reassure the Brahmin community, its strongest support base across regions. Having cut his teeth in the Rashtriya Swayamsevak Sangh, at the grassroots, Mr. Sharma has risen overnight to the top seat, which is also a signal to the cadre of the party that anything is achievable in the BJP. The new power structure also means the sidelining of the old guard, including Vasundhara Raje, the first woman Chief Minister of the State who held the post for two terms. What is in store for her remains unclear. Mr. Sharma is the second Brahmin Chief Minister of the BJP in Rajasthan; the party has also appointed Deputy Chief Ministers from the community in Madhya Pradesh and Chhattisgarh. The BJP considered it wise to comfort its core upper caste base to balance its continuing pivot to Other Backward Classes (OBC) under Prime Minister Narendra Modi. Diya Kumari, a Rajput and Prem Chand Bairwa, who hails from a Dalit community, are the Deputy Chief Ministers, consolidating its rainbow caste coalition in Rajasthan. There are 29 berths in the Council of Ministers to be filled. Gujjars and Jats among the OBC community and tribals of Rajasthan would expect representation. Mr. Sharma has to keep the party flock together; that he was handpicked by Mr. Modi gives him the strength to do so. The BJP campaign was centred around what was labelled 'Modi's Guarantees'.

The BJP has promised a lot to voters and Mr. Sharma now has the responsibility to fulfil them. A special investigation team to probe paper leaks during the previous Congress regime, establishment of women police stations, appointment of 2.5 lakh government employees, and a subsidy of ₹450 per LPG cylinder for Ujjwala scheme beneficiaries were among the campaign promises of the BJP. The party has also promised a ₹2 lakh savings bond for each girl child. Mr. Sharma has to deal with a complicated fiscal environment, avoid a conflict with the party old guard, and balance the social equations in the State. The new Chief Minister has inspired enthusiasm among party workers and people alike, and the BJP central leadership will likely expect him to be in control well ahead of the Lok Sabha election in April-May. He will also have to safeguard the trust endowed in him by the central leadership. Mr. Sharma, who has no previous experience in government, may have to rely on an efficient set of political and bureaucratic advisers as he grapples with political and governance challenges.

A TALE OF TWO PARLIAMENT ATTACKS — AND SHIFTING SANDS OF POLITICS, FROM RIVALRY TO BAD BLOOD

On December 13, 2001, India's then Vice-President and Rajya Sabha Chairman, Krishan Kant, was heading to the exit gate of Parliament meant for the "V-P"; the convoy of cars parked outside the gate was ready to take him to his residence. The back door of his car had already been opened for him.

Kant had almost reached the exit gate, when someone came running after him. A group of MPs had come to his chamber to see him urgently. The V-P turned around and went back to his chamber.

While Kant was talking to the MPs in his office, there were sound of firing from outside. A car (with terrorists) came towards his vehicle and scraped it and firing ensued; a security guard from his team was killed. The massive Parliament gates were hastily closed.

The terrorists had mounted an attack on the Parliament of India, opening fire through its complex. The idea seemed to be to hold India's top leaders inside the Parliament House "hostage". But

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



thanks to prompt retaliation by the security staff, they were not able to enter into the building. Eight security personnel lost their lives that day.

The then Home Minister L K Advani rushed into Kant's chamber to enquire about his safety. Prime Minister Atal Behari Vajpayee called him up, the President spoke to him. MPs from all parties filled his chamber to congratulate him for his lucky escape.

Only minutes earlier, a concerned Sonia Gandhi, the then Congress president, had called up PM Vajpayee. She wanted to make sure he was "safe". A scribe later remarked, "It was a reassuring sign that day that India's democracy was safe." For it showed that political opponents need not be enemies.

Parliament was attacked again this year. The date was the same — 13 December. But there was a gap of 22 years in between. In 2001, the terror attack was well-planned, using firearms – but the terrorists did not manage to storm the building. This time, two men managed to come in, getting past three security checkpoints to enter into the Lok Sabha. They set off yellow gas canisters which they had managed to smuggle in. They did not use firearms — and no one was hurt, nor was the Parliament building damaged.

The intruders said they were unemployed and wanted to protest—unlike in 2001, they seemed amateurs but their claims will have to be investigated further. "Protest" or otherwise, they managed to show how easy it was to breach the security of Parliament—and the supposedly foolproof new Parliament building at that.

Watching them on TV, it seemed bizarre that the intruders had managed to do so in the country's supposedly most protected building, jumping from the visitors' gallery into the Lok Sabha chamber, hopping from one table to the next in the House until they were overpowered by the MPs and security staff. That it should be happening in the world's most populous democracy—one that prides itself as the world's fifth largest economy and as a nation moving away from its old image of being a "soft" State—it has filled many with disquiet.

After the 2001 attack, old timers recall that a committee was set up to beef up security—with steps like the use of the CCTV cameras, the RFIDs on bonafide parliament cars, issuing photo ID cards to visitors, measures to deflate tyres if needed, barricades on approach roads, the closing of two main Parliament gates.

And now also, security can be expected to be tightened, which would also result in further constricting the access of media persons and visitors to Parliament.

In 2001, the Opposition took the government to task for its "laxity" on the floor of the House. But the two sides also moved in step to ensure that correctives were put in place. 2023 has seen the disquieting phenomenon of the suspension from Parliament of 14 MPs for "disrupting" the two Houses—or, in other words, for aggressively raising the issue of the intrusion into Parliament and the security lapse that it reflected.

The Opposition would not be worth its salt if it does not raise questions in Parliament on an issue as grave as the breach of its security—and to try and hold the government to account. The suspension of Opposition members on an issue such as this was totally avoidable.

The role of the presiding officers has also undergone a change during the last two decades. Though there have been exceptions, presiding officers have tended not to antagonise the government of



the day, but earlier they used to show a greater flexibility and fairness towards the Opposition, which is less visible now.

The fundamental difference between 2001 and 2023 is however underscored by the changing nature of politics that has come about in the intervening years. There is not just an escalating confrontation in Indian politics but also an increasing bitterness in inter-party relations, which impinges on Parliament's functioning. It is neither healthy nor good, and is something the country could do without.

NUMBER OF CAG AUDITS ON UNION GOVT. TABLED IN PARLIAMENT HITS A LOW

In the calendar year 2023, only 18 audit reports on the Union government's accounts, prepared by the Comptroller and Auditor General (CAG), were tabled in Parliament. A year-wise analysis shows that the number of audits on the Union Government tabled in Parliament has been decreasing for some years now. On average, 22 reports were tabled each year between 2019 and 2023, compared to the 40 reports tabled between 2014 and 2018. The number of reports tabled peaked in 2015 at 53, but in four of the past six years, 20 or fewer reports were tabled.

The figures were arrived at by scraping over 400 audit reports on the Union government, published on the CAG website, between 2010 and 2023. These are reports that have been tabled in Parliament and are available in the public domain as of December 10. Three more reports submitted to the government in April, July, and August 2023 were yet to be tabled in Parliament.

A similar trend was observed across departments. For instance, 14 audit reports of the Railways Department were tabled in the last five years, down from 27 in the previous five-year period. For the Civil Department, 34 audit reports were published in the last five years compared to 42 in the previous five-year period. The latest report of the Defence Department available in the public domain dates back to 2017. According to a 2020 report in The Indian Express, former CAG Rajiv Mehrishi said, "The idea is to make (Defence reports) not too easily accessible... because someone in Washington, Beijing or Islamabad may also be watching."

The CAG is a constitutional authority which heads the Indian Audit and Accounts Department (IA&AD). The two entities are known as the Supreme Audit Institution of India (SAI).

As of 2021-22, the IA&AD had a staff strength of 41,675, a steady decline from the peak of 48,253 in 2013-14. The number of IA&AS officers employed came down to 553 in 2021-22 from 789 in 2014-15. The strength of the audit and accounting staff reduced from over 26,000 in 2013-14 to 20,320 in 2021-22. The total employees as a share of sanctioned posts have remained mostly stagnant in the years, oscillating slightly between 66% and 75%. Chart 3 shows the financial year-wise staff strength in the IA&AD. It also plots the staff strength as a share of sanctioned posts. The sanctioned posts were not available for FY18.

"Due to persistent efforts, the vacancy position has significantly decreased; and despite attrition and retirements is expected to sharply decrease in the ensuing months, due to the major recruitment drive undertaken in recent years," said a CAG official.

The budget allocated to the IA&AD has also declined when considered as a share of the Union Budget's total expenditure. In FY24, allocation to the IA&AD formed 0.13% of the Union Budget, down from 0.19% in FY17. Chart 4 shows the year-wise amount spent by the IA&AD as a share of the Union Budget's total expenditure. FY24 is the Budget estimate and FY23 is the revised one.



Even in absolute terms, the budget allocated to the IA&AD increased from ₹3,780 crore in FY17 to ₹5,806 crore FY24 — a 53% increase, much lower than the 128% increase in the Union Budget's total expenditure in the same period.

UNSEEMLY TURN

The conflict between the Governor and the Left Democratic Front government in Kerala has turned unseemly. Raj Bhavan's relations with regimes other than those run by the Bharatiya Janata Party have been quite testy in recent years, and the problem is quite acute in Kerala. The issue arises from sharp political and ideological differences, as appointees in Raj Bhavan have made it a point to use their position as chancellor of universities as well as their constitutional role in granting assent to Bills to cause annoyance to elected governments. In a sign of rising acrimony, differences over appointments to the Senate of the Kerala University have snowballed into frequent protests. While student activists accuse the Chancellor, Governor Arif Mohammed Khan, of appointing right-wing sympathisers to the Senate, he has been complaining about political interference in the universities. In the latest incident, the University of Calicut saw dramatic scenes as activists of the Students' Federation of India (SFI) put up posters against the Governor-Chancellor. The Governor has accused Chief Minister Pinarayi Vijayan and the State police of being behind the poster campaign against him. Some days ago, SFI activists blocked Mr. Khan's car, resulting in some arrests.

Recent court judgments have underscored that elected regimes should not be undermined by unelected Governors. Such verdicts have drawn public attention to the partisan role played by Governors to stymie governance in States not run by the ruling party at the Centre. In a recent ruling, the Supreme Court of India set aside a reappointment given to a vice-chancellor in Kannur University on the ground that there was unwarranted interference by the government. Given that chancellors are expected to act independently, there is much scope for a clash with the government. However, responding to such situations through organised protests is not advisable. Chief Ministers should instruct their supporters to avoid street protests that turn belligerent. One way to resolve the issue is by legislation either removing Governors as chancellors or transferring the chancellor's powers to any other authority. However, Bills containing such changes are not likely to get the Governors' assent. This does make legal redress difficult for those aggrieved by what they deem to be arbitrary use of the chancellor's powers. It may be time to think of a long-term solution in the form of a statutory prohibition on Governors being chancellors of State universities. The M.M. Punchhi Commission on Centre-State relations had recommended ending the practice of burdening Governors with the role of university chancellor.

JHARKHAND ASSEMBLY ONCE AGAIN PASSES BILL TO DEFINE LOCALS WITHOUT AMENDMENTS

The Jharkhand Assembly on Wednesday again passed the Bill, which stipulates land records of 1932 as the basis for the State's domicile policy and is popularly known as the 'Khatiyani' Bill, without any amendments. It also has provisions for reserving grade 3 and grade 4 government jobs for locals.

The Bill was earlier passed on November 22, 2022, but returned by the Governor and suggestions were sought from the Attorney General.



Mr. Soren proposed that the Bill passed last year should be approved again in the same form. He said the Attorney General's advice was not logical, and urged that the Bill be included in the Ninth Schedule of the Constitution.

"The Governor has attached the legal advice of the Attorney General with his message and has accordingly directed reconsideration of the Bill. But in relation to the order of the Supreme Court in Satyajit Kumar vs. State of Jharkhand, I would like to say that the decision is not relevant in the context of the present Bill," Mr. Soren said.

The Chief Minister said, "In the order, the Supreme Court has ruled that the Governor does not have the right to make laws or amend them under paragraph 5 (1) of the Fifth Schedule of the Constitution. The Legislative Assembly of the State has this power to make rules under Article 309 of the Constitution. For this reason, we decided to prepare a Bill and obtained the consent of the Assembly."

"We have also made a provision in the Bill to include the current domicile-related Bill in the Ninth Schedule, so that it can provide a protective shield against judicial review," he said.

Leader of the Opposition Amar Bauri said it was clearly written in this Bill that unless it is included in the Ninth Schedule, the system would not be implemented. He claimed that the government was trying to postpone this matter by sending it to the Centre for inclusion in the Ninth Schedule. "The government should accept that it has failed in providing employment."

BANKING ON WELFARE SCHEMES, SOREN SEEKS TO DRUM UP RURAL SUPPORT AHEAD OF LS POLL

Nearly three-fourth of the Jharkhand population lives in villages and he wants to ensure that people are not forced to rush to block or district headquarters to claim benefits of welfare schemes, said Chief Minister Hemant Soren during his government's outreach programme at Chappar Toli village in Gumla district.

The Chief Minister is on a whirlwind tour of the State, visiting every district to make people aware of his government's welfare measures under the Apki Yojana, Apki Sarkar and Apke Dwar programme.

Promising doorstep delivery of services on Tuesday, Mr. Soren also laid the foundation stone of 105 projects worth ₹402 crore and inaugurated 45 schemes worth ₹64 crore.

Mr. Soren is banking on a number of welfare policies to beat the anti-incumbency against his government and offset the fallout of the corruption charges against him in the run-up to the general election. One such scheme is the Savitribai Phule Kishori Samriddhi Yojana, a scholarship plan for school-going girls. It provides a scholarship of ₹40,000 to them from Class 8 to 12. Launched earlier this year, the benefit was limited to only two girls per family but the government lifted the bar this month, extending the benefit to all school-going girls in a household. The State government has approved a budget of ₹300 crore for it. Currently, 6.5 lakh girls benefit from the scheme.

The other scheme that earned the appreciation of people is the Phulo Jhano Ashirwad Yojana. Under the scheme, those who were previously engaged in brewing countrymade liquor got ₹50,000 in financial aid to make a fresh start. The scheme was launched when Mr. Soren formed the government in 2019.



Meanwhile, the CM said his government will be setting up close to 5,000 schools of excellence. He said the State government is also bearing entire expenses of the children belonging to minorities, Dalit and tribal groups, if they want to study abroad. “Presently, four children from Gumla are pursuing higher education abroad,” he said, citing his government’s Guruji Student Credit Card Scheme, which provides financial support to the students wanting to study abroad.

EXPRESS VIEW ON CASTE DISCRIMINATION IN KARNATAKA SCHOOL: CAST OUT

Tamil Dalit writer Bama spent a considerable part of her teaching career in government schools in rural Tamil Nadu, coaxing first-generation Dalit students to come to a place that had often had no place for their forefathers. No stranger to ostracism, she was aware that it took careful hand-holding. In an interview to this paper in 2018, Bama spoke of how she would begin lessons by telling her students that she loved them and would be there for them, encouraging them to learn, to be at ease occupying space in an institutional environment meant to free them of caste oppressions.

Love or patience were not the guiding motivations for the principal and a teacher of Morarji Desai Residential School Malur taluk in Karnataka’s Kolar district. They were caught on camera overseeing Dalit students clean the septic tank. Fifteen days after the incident and a day after the video surfaced, the two, and the school’s warden, have been arrested. Shock at the incident, however, would be disingenuous, given the frequency of such occurrences. Change Karnataka with Tamil Nadu and the headmistress of the panchayat middle school in Erode Palakarai was suspended last year for forcing five Scheduled Caste (SC) students to clean the school toilets.

In Uttar Pradesh’s Auraiya, a 15-year-old SC boy died after being beaten by an upper-caste teacher in September 2022 for an alleged spelling error; around the same time, in Rajasthan, a nine-year-old died after being beaten by an upper-class teacher for drinking water from a pot meant for upper-caste teachers.

The recurrence of caste-based discrimination, violence and exclusion in educational institutions points to an alarming systemic failure. It begins with an under-representation of backward communities in positions of authority and is perpetuated by apathy towards the generational trauma of students from backward classes at an individual level. The consequences of this imbalance become further manifest at the level of higher education — in the last five years, over 13,000 SC, ST and OBC students have dropped out of IITs, IIMs and central universities for a variety of reasons, including discrimination. Greater emphasis needs to be put on sensitisation and on the strengthening of not just redressal mechanisms but also deterrents for those who transgress. Schools are a place of initiation — into education, inclusion, empathy, hope. They require role models who can rise above prejudices.

BIHAR TO DEVELOP SITA’S BIRTHPLACE: AN EXPERT EXPLAINS THE HISTORY AND MYTHOLOGY OF MITHILA

Bihar Chief Minister Nitish Kumar recently launched a Rs 72-crore development plan for Goddess Sita’s birthplace at Punaura Dham in Sitamarhi. His party, JD(U), also slammed the Centre for “concentrating too much on the Ayodhya temple and Lord Rama, and doing little for Sita”. To understand this, it is imperative to understand Sita’s Bihar connections and her importance in the Bihari religious imagination.



Punaura Dham The Punaura Dham site plna.

Acharya Kishore Kunal, former IPS officer and ex-chairman of the Bihar State Board of Religious Trust, on whose report the Punaura Dham was included in the Centre's Ramayana Circuit, spoke to The Indian Express on the history and mythology of Mithila in Bihar, and its indelible links to Sita. Excerpts:

What are the mentions of present-day Bihar in the Ramayana?

As a researcher and scholar, I will first go by the source book, the Valmiki Ramayana, on which are based many subsequent versions of the Ramayana, including Tulsidas's Ramcharitmanas.

The Valmiki Ramayana has used four words to refer to Sita — Vaidehi, Janaki, Sita and Mithilapuri. Mithilapuri is an obvious reference to Mithila, while Vaidehi and Janaki are names derived from her father, King Janak, also called Videh. Sita herself narrates the story of her birth — she was found in a field being ploughed by Janak — to Anusuiya (wife of Rishi Atri) during Ram's exile at Chitrakoot.

Kishore Kunal Acharya Kishore Kunal, former IPS officer and ex-chairman of the Bihar State Board of Religious Trust. (Photo: Express)

Ram and Laxman are also believed to have visited several sites in Bihar when travelling with Maharishi Vishwamitra. As per Valmiki's account, after leaving Ayodhya, Chitrakoot was their first stop. Their second stop was near the confluence of Ganga and Saryu in the present-day Saran district. The third place they went to was Siddhashram near the Ganga in present-day Buxar.

They later travelled by bullock cart to the confluence of Ganga and Sone near Patali (Patna). The Sone-Ganga confluence course has shifted away from Patna over the years. Ram, Laxman and Vishwamitra crossed the Ganga and were welcomed by Vaishali's king, Sumati. The three later walked down to Ahalya's ashram, now known as Ahirouri in Mithilapuri (present Darbhanga).

Mithila also features during the wedding of Ram and Sita, before which Ram snaps Shiva's dhanush (bow).

There is a mention of Ram's baraat (wedding procession) reaching Mithilapuri from Ayodhya in four days and returning in three days. Valmiki mentions Ram visiting Mithilapuri only once, whereas some subsequent versions of the epic claim he went there after being crowned king too.

What is the geographical extent of Mithila?

In the Vishnu Puran, Mithila is described as a place to the north of Ganga and south of Himalayas. Abul Fazl in Ain-e-Akbari clearly mentions Mithila as one of the parganas (administrative divisions), earmarking its location and spread, which includes the present-day Darbhanga, Madhubani, Sitamarhi, Supaul, Saharsa, Madhepura and some adjoining areas of Bihar and Nepal.

Mithila has also been called Mahla, and finds mention in the revenue records of the erstwhile Sanyukt Prant (United Provinces) of Bihar, Bengal and Orissa.

Which is the birthplace of Sita in Sitamarhi, the Janaki temple or the Punaura Dham?

Until recently, it was believed that the Janaki Sthan in Sitamarhi, which has a pond and other religious structures, was the birthplace of Sita. But our research for close to 10 years showed that



the Janaki temple was built by a sage around 200 years ago, after he claimed to have seen the place in his dream as Sita's birthplace.

Our research, based on Valmiki Ramayan and some travellers' accounts, ruled in favour of Punaura Dham, which also has a 100-year-old temple along with Sitakund, Sita Vatika and Luv Kush Vatika.

Janaki Kund in Punaura The Janaki Kund in Punaura. (Photo: Wikimedia Commons)

When the Centre sought a report from the Bihar government on Sita's birthplace for the Ramayana Circuit, I, with the support of other researchers, submitted the name of Punaura Dham. This has been accepted by both the state and central governments now. The state's decision to develop Punaura Dham came only after conclusive research.

Statistician and historian Sir William Wilson Hunter (1877), in A Statistical Account of Bengal, Volume 13, says that "Panaura (Punaura), three miles south-west of Sitamarhi, also puts in a claim to the honour of being Sita's birthplace."

What is the history of Janakpuri in Nepal?

Janakpuri is a relatively modern name for Mithilapuri, which is mentioned in Valmiki Ramayan. Our government, in coordination with the Nepal government, has made Janakpuri a part of the Ramayana Circuit.

Janakpur became a part of Nepal after the 1816 Indo-Nepal treaty. Even the leading historian on Nepal, Francis Buchanan Hamilton, has not written anything about 'Janakpuri'. What we have is a mention of Mithilapuri.

Janaki temple in Janakpur, Nepal The Janaki temple in Janakpur, Nepal. (Photo: Wikimedia Commons)

What are some historical references of the present-day Sitamarhi?

As per the account of leading archaeologist Alexander Cunningham, "Sita-Marhi is situated a little more than 40 miles north-West of Darbhanga in a direct line, and 14 miles from the nearest point of the Nepal frontier." It is "bounded on the east by a branch of the Sowrun Nala.... portions of the village are inundated by the numerous small streams which become confluent in parts, and flood the country. Of the antiquities at Sita-Marhi there is little to be said, and with the exception of some temples dedicated to Sita, the place is quite devoid of archaeological interest."

What are the Bihar government's plans for Punaura?

According to the information available with the board of religious trust, the Punaura Development plan includes renovation of the temple, preparing a roofed pradakshina path (path for circumambulation) around it, and developing the Luv Kush Vatika, Sita Vatika, and Sita Kund. A meditation mandap will also come up, and a 3-D film screened to show Sita's life journey.

Besides, the Mahavir Temple Trust will construct a Sita temple inside the Sitakund on a budget of Rs 100 crore. We will embark on this temple project after the opening of the Ram temple in Ayodhya in January 2024.



GOVT LAUNCHES SUPPLEMENTARY TEXTBOOK ON BHAGAVAD GITA FOR STUDENTS OF CLASS VI TO VIII

The Gujarat government has introduced a supplementary textbook on the Bhagavad Gita for students in classes VI to VIII, starting from the next academic year. The move is aimed at connecting students to India's rich, diverse, and ancient culture and knowledge systems, according to Minister of State for Education Praful Pansheriya. The decision aligns with the National Education Policy (NEP) of 2020, which emphasizes incorporating spiritual principles and values into the curriculum.

Pansheriya expressed gratitude to Chief Minister Bhupendra Patel for the decision, stating that it will make students proud and foster a connection to India's cultural and traditional heritage through the teachings of the Bhagavad Gita. The supplementary textbook is expected to instill moral values among students and play a crucial role in improving overall values, as per Pansheriya.

The launch of the textbook coincided with Gita Jayanti, a Hindu observance marking the day of the Bhagavad Gita conversation between Arjuna and Lord Krishna on the battlefield of Kurukshetra. Pansheriya mentioned that this is the first part of the textbook, designed for classes VI to VIII, and two more parts for classes IX to XII will be made available soon.

It's worth noting that the Gujarat government had previously announced the inclusion of the Bhagavad Gita in the school syllabus for classes VI to XII in the state. However, this decision faced legal challenges, with a resolution introducing the Bhagavad Gita in schools being challenged in the Gujarat High Court on grounds of constitutional validity and alleged contravention of the NEP. The matter remains pending in court.

TURBULENT WINTER SESSION ENDS DAY BEFORE SCHEDULE

The Lok Sabha and the Rajya Sabha were adjourned sine die a day in advance after what is being termed as the frostiest Winter Session of relations between treasury and Opposition benches in India's history. The session saw a security breach in the Lok Sabha, the suspension of 146 MPs, and the disqualification of Trinamool Congress MP Mohua Moitra from the Lower House.

The session, held against the backdrop of the results of the Assembly elections in five States, with the BJP winning the three Hindi-speaking States of Madhya Pradesh, Rajasthan, and Chhattisgarh; the Congress winning Telangana; and the Zoram People's Movement (ZPM) winning Mizoram, was expected to be stormy, with Ms. Moitra's disqualification on December 8, following the adoption of a report by the Ethics Committee of the Lok Sabha.

But barely had the sparks dimmed that the Lok Sabha witnessed a security breach, with two persons entering and setting off coloured gas canisters on December 13, 22 years to the day terrorists had attacked the old Parliament House. While the incident fortunately did not lead to any casualties, Speaker Om Birla did not agree to the Opposition's demand for a statement by Union Home Minister Amit Shah, and as Opposition MPs protested, carrying placards into the Well of the House, a series of suspensions began, with several MPs referred to the Privileges Committee.



Suspensions galore

While Mr. Birla, in a letter to the MPs, said the suspensions were the result of placards being carried, and “unruly” behaviour, the protests continued, as did the suspensions. Since last Thursday, 146 MPs have been suspended from both Houses, with three of them suspended for the duration of the session. This saw 99 out of the 139 INDIA bloc MPs suspended in the Lok Sabha, and 46 out of 97 of them suspended in the Rajya Sabha.

Among those suspended is Danish Ali of the Bahujan Samaj Party (BSP), which is not officially with the INDIA bloc; Mr. Ali had recently been suspended from his own party.

The Opposition’s protests continued outside the House, with a controversy erupting over the mimicry of Vice President Jagdeep Dhankar by TMC MP Kalyan Banerjee. A protest march by all suspended MPs also took place outside Parliament on the last day of the session, with Congress president Mallikarjun Kharge leading it.

In his valedictory remarks, Mr. Birla spoke of all of this, but also said that the Lok Sabha had recorded 74% productivity in the winter session over 14 sittings, and that the House had worked for 61 hours and 50 minutes.

He said a total of 18 bills, including the Bharatiya Nyaya Sanhita 2023, Bharatiya Nagarik Suraksha (Second) Sanhita, and the Bharatiya Sakshya (Second) Sanhita — to replace the Indian Penal Code, the Code of Criminal Procedure, the Indian Evidence Act, respectively — were passed in the Lok Sabha. The legislation will result in a massive change in the legal system of the country. The Bills were also passed in the Rajya Sabha on Thursday.

The contentious Telecommunications Bill, which provides for the government to temporarily take control of telecom services in the interest of national security, and provides a non-auction route for the allocation of satellite spectrum, was passed by both Houses, as was the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill that seeks to establish a mechanism to appoint the Chief Election Commissioner and Election Commissioners.

Starred questions

Mr. Birla said that 55 starred questions had been answered orally during the Session, and a total number of 265 matters were taken up under Rule 377. As many as 1,930 papers were laid on the Table of the House, the Speaker added. The Upper House sat for 65 hours over 14 sittings and addressed over 2,300 questions.

Mr. Dhankhar said in his valedictory remarks in the Rajya Sabha that 17 Bills had been passed during the session, and the three Bills on the criminal justice system had unshackled the colonial legacy of criminal jurisprudence, which was hurtful to the citizens of this country and favoured alien rulers.

The Upper House sat for 65 hours over 14 sittings and addressed over 2,300 questions. Over 4,300 papers were laid on the Table of the House. “I am pained to state that nearly 22 hours were lost due to avoidable disruptions adversely impacting our overall productivity that finally stood at 79%. Weaponising disruptions and disturbance as a political strategy doesn’t resonate with our constitutional obligation of keeping the interest of people at large above any other political considerations,” Mr. Dhankhar said.



HOW WILL ARTICLE 370 VERDICT IMPACT FEDERALISM?

The story so far:

On December 11, the Supreme Court unanimously upheld the power of the President to abrogate Article 370 of the Constitution, which in August 2019 led to the reorganisation of the State of Jammu and Kashmir (J&K) into two Union Territories and denuded it of its special privileges. It reasoned that Article 370 was only a ‘temporary provision’ to ease the accession of the then princely State to the Union at a time of internal strife and war.

What did the lead judgment say?

In the lead judgment, Chief Justice of India D.Y. Chandrachud, writing for himself, Justices B.R. Gavai and Surya Kant, pointed out that J&K had divested itself of “any element of sovereignty” after the execution of the Instrument of Accession to the Union in October 1947. Justices Sanjay Kishan Kaul and Sanjiv Khanna concurred in their opinions. Constitutional experts say the observations in the verdict will have a lasting impact on federalism, which is recognised as a basic feature of our Constitution.

What did the petitioners argue?

The petitioners had argued that the President while exercising powers under Article 356 of the Constitution cannot take actions with ‘irreversible’ consequences in a State during President’s rule. Significant legislative alterations were made to the State during President’s rule such as the repeal of its special status, the separation of Ladakh, and its conversion into a Union Territory — which meant that the Union government could unilaterally bring about such enduring changes without having to solicit the consent of the State legislature.

Dismissing such contentions, the Court reasoned that challenging the exercise of the President’s power on the ground of irreversibility would open the way for challenging everyday administrative actions which would in effect put the administration in the State at a standstill. It, however, underscored that such exercise of power must have a reasonable nexus to the object of the Presidential Proclamation. It added that the onus was on the person challenging the actions of the President during an emergency to prima facie establish they were a “mala fide or extraneous exercise of power”. Reliance was also placed on the Supreme Court’s ruling in S. R. Bommai versus Union of India (1994) which defined the ambit of powers that can be exercised during President’s rule.

Can a State be turned into a Union Territory?

The Court observed that carving out the Union Territory of Ladakh out of J&K was permissible under Article 3 of the Constitution and accordingly upheld the Jammu and Kashmir Reorganisation Act, 2019. However, owing to the assurance given by the Union government that J&K’s statehood would be restored soon, the court did not go into the issue of whether the conversion of J&K into a Union Territory was valid. Importantly, the court pointed out that the views of the State legislature regarding the proposed reorganisation of the State are recommendatory and not binding on Parliament.

The Chief Justice, however, cautioned that “the necessary effect of converting a State to Union Territories which is that autonomy would be diminished, the historical context for the creation of federating units, and its impact on the principles of federalism and representative democracy”



must be borne in mind. Reiterating similar concerns, Justice Sanjiv Khanna stated that the conversion of a State into a Union Territory has “grave consequences” and denies the citizens of the State an elected government, and impinges on federalism. Thus, such a conversion has to be justified by giving very strong and cogent grounds.

What about the role of the State?

The Court ruled that the President while exercising powers under Article 370(3) of the Constitution can ‘unilaterally’ notify that Article 370 ceases to exist. It further said that there was no requirement for the President to secure the concurrence of the State government in this regard as mandated by the provisos to Article 370(1)(d).

“The principle of consultation and collaboration underlying the provisos to Article 370(1)(d) would not be applicable where the effect of the provision is the same as Article 370(3). Since the effect of applying all the provisions of the Constitution to Jammu and Kashmir through the exercise of power under Article 370(1)(d) is the same as issuing a notification under Article 370(3) that Article 370 ceases to exist, the principle of consultation and collaboration are not required to be followed,” the Chief Justice reasoned. It was also pointed out that such collaboration between the President and the State government would have been necessary if provisions of the Indian Constitution were to be applied to the State in a manner that would require amendments to the State Constitution. However, in this case, the President through Presidential Order [C.O.272] ensured a total application of the Indian Constitution to the State to the effect that the State’s Constitution became inoperative.

What did the Court specify about the President’s powers?

The petitioners had pointed out that the proviso to clause 3 of Article 370 makes it clear that the presidential power to abrogate Article 370 was contingent on the recommendation of the J&K Constituent Assembly. However, the Court ruled that even after the dissolution of the Constituent Assembly on January 26, 1957, the President’s power to abrogate the provision by exercising powers under Article 370(3) subsists and could be exercised “unilaterally”. The Chief Justice asserted that holding the power under Article 370(3) cannot be exercised after the dissolution of the Constituent Assembly would lead to “freezing of the integration” contrary to the purpose of introducing the provision. Concurring with this view, Justice Kaul emphasised that the purpose of Article 370 was to slowly bring J&K on par with the other States of India and thus the “requirement of recommendation of [the] J&K Constituent Assembly cannot be read in a manner making the larger intention redundant”.

What about ‘asymmetric federalism’ ?

The Court pointed out that unlike the Constitution of India, “there is a clear absence” in J&K’s Constitution of a reference to sovereignty. Article 370 was held to be merely a “feature of asymmetric federalism” similar to other provisions in the Constitution such as Articles 371A to 371J — examples of special arrangements for different States. “If the position that Jammu and Kashmir has sovereignty by virtue of Article 370 were to be accepted, it would follow that other States which had special arrangements with the Union also possessed sovereignty. This is clearly not the case,” the Chief Justice said. He added that although different States might enjoy varying degrees of autonomy, the difference, however, remains one of degree and not of kind in a federal set-up.



ON SELECTING ELECTION COMMISSIONERS

The story so far:

On December 12, the Rajya Sabha passed The Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Office and Terms of Office) Bill, 2023. It is likely to be enacted into a law after being passed by the Lok Sabha in the current winter session. It provides for the procedure for appointment of the Chief Election Commissioner (CEC) and the other two Election Commissioners (ECs).

What does the Constitution say?

Article 324 provides for the composition of the Election Commission of India (ECI). It consists of the CEC and two other ECs. The Constitution provides that the appointment of the CEC and EC shall, subject to the provisions of any law made by Parliament, be made by the President. While the existing parliamentary law provides for their conditions of service, it is silent with respect to appointments. The appointments till date are made by the President, that is the Central Government and there is no mechanism for ensuring independence during the appointment process.

What did the Supreme Court rule?

A Public Interest Litigation (PIL) filed by Anoop Baranwal in 2015 pleaded for the Supreme Court to issue directions to set up an independent, collegium-like system for the appointment of the CEC and ECs. The Supreme Court in this case, in March 2023, held that there has been a legislative vacuum due to the absence of any law by Parliament in the last 73 years (since the adoption of the Constitution) with respect to the appointment of the CEC and EC. The independence of the ECI is essential for ensuring free and fair elections that is paramount for a vibrant democracy. The Supreme Court drew reference to various other institutions supporting constitutional democracy that have independent mechanisms for the appointment of its head/members like the National and State Human Rights Commission, the Central Bureau of Investigation (CBI), Information Commission, Lokpal etc.

In the past, the Dinesh Goswami Committee on Electoral Reforms (1990) and the Law Commission in its 255th report on Electoral Reforms (2015), had suggested that the CEC and ECs should be appointed by a committee consisting of the Prime Minister, the Chief Justice of India (CJI) and the Leader of the Opposition or the largest Opposition party in the Lok Sabha. Considering these recommendations, the Supreme Court, exercising its powers under Article 142 (to issue directions for doing 'complete justice' in any matter), laid down that the CEC and ECs shall be appointed by a committee consisting of the Prime Minister, the CJI and the Leader of the Opposition or the largest opposition party in the Lok Sabha. It said that this mechanism shall be in place till Parliament enacts a law on this matter.

What does the proposed law provide?

The CEC and other ECs shall be appointed from persons who are holding or have held a post equivalent to the rank of Secretary to the Government of India. There shall be a search committee headed by the Minister of Law and Justice, who shall prepare a panel of five persons for consideration to the selection committee. The CEC and EC shall be appointed by the President on the recommendation of this selection committee consisting of the Prime Minister, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister to be nominated by the Prime Minister.



It is for the first time that the Parliament is proposing a structured mechanism for identification of suitable persons for the post of CEC and EC. However, this bill removes the CJI from the selection process that was laid down in the Anoop Baranwal case.

What are the best practices globally?

The international practices for selection and appointment of members to the electoral body varies between different democracies. In South Africa, the President of the Constitutional Court, representatives of the Human rights Court and gender equality are involved. In the U.K., the House of Commons approves the candidates, whereas in the U.S., the appointment is by the President and confirmed by the Senate.

While the proposed Bill moves the appointment process from just an executive decision to a committee-based selection, it is still tilted in favour of an incumbent government. The Supreme Court had considered the recommendations of various committees and also the mechanism for appointment to certain independent bodies like the CBI (where the CJI is involved) before laying down its selection procedure. While it is the prerogative of Parliament to legislate on this subject, it may have been appropriate to retain the CJI in the selection committee to ensure utmost independence. However, in all likelihood the Bill is likely to be enacted into a law in its present form. It would be laudable and instil a great deal of confidence in the public about the functioning of the ECI, if at least the selections under the new law are made by unanimous decisions by the proposed selection committee.

TWO DOWN

The conviction of senior Dravida Munnetra Kazhagam (DMK) functionary K. Ponmudy, leading to his losing his position in the Tamil Nadu Cabinet, is a rare instance of a serving Minister being found guilty of corruption when his own party is in power. Any verdict that punishes tainted public servants and dislodges them from office should be seen as salutary. In Mr. Ponmudy's case, one will have to await the outcome of his expected appeal in the Supreme Court, which will have to decide whether to uphold his acquittal by the trial court or its reversal by the Madras High Court. As of now, he and his wife have been given a sentence, suspended for 30 days, of three years in prison and a fine of ₹50 lakh, for holding unexplained assets of ₹1.72 crore. The case dates back to his stint in the DMK ministry from 2006-2011, and the investigation and prosecution were conducted under an All India Anna Dravida Munnetra Kazhagam regime. Mr. Ponmudy is also under scrutiny by the Enforcement Directorate which is probing the money-laundering aspect of an accusation that he gave illegal licences to his son and relatives for red sand mining. He is the second Minister to lose his portfolio after V. Senthil Balaji, who is in jail in another money-laundering case.

A key aspect of his appeal would be whether the court was right in reversing the trial judge's finding that Mr. Ponmudy and his wife P. Visalakshi should be treated as assesseees independent of each other and that vigilance investigators erred in clubbing their incomes to demonstrate that their combined income and expenditure did not account for about 65% of the assets standing in their names. Justice G. Jayachandran has questioned the claim that Ms. Visalakshi had independent sources of business and agricultural income and criticised the trial judge for accepting belatedly filed tax returns containing "bloated income". The judge's view that a mere income claim cannot be accepted without actual sales and profit figures for businesses run by her appears reasonable. He has upheld the prosecution's expert witnesses who assessed her agricultural income, based on cultivable land holdings, at a far lower level than the income she had claimed in her returns. For



the ruling DMK, the conviction of one of its deputy general secretaries at a time when it is facing a barrage of corruption charges, is an undoubted political setback. The party will be hoping that Mr. Ponmudy gets relief from the Supreme Court in the form of a suspension of conviction to overcome his disqualification. However, a stay on conviction is quite rare in corruption cases. Involvement of senior leaders in corruption charges is certain to affect the public confidence in the DMK government.

ILLEGAL DELHI COLONIES PROTECTED FOR ANOTHER 3 YEARS: WHAT THE BILL PASSED IN PARLIAMENT SAYS

This “process of conferring the ownership rights to the residents of unauthorised colonies and action as per the Development Control Norms for unauthorised colonies is under progress and will take time,” the Act says.

No punitive action such as demolitions or sealing can be taken against certain categories of slum dwellers, hawkers, and unauthorised colonies in Delhi for another three years.

Both Houses of Parliament on Tuesday passed The National Capital Territory of Delhi Laws (Special Provisions) Second (Amendment) Bill, 2023 to extend the protection, which would have ended with this year, until December 31, 2026.

Housing and Urban Affairs Minister Hardeep Puri told Lok Sabha that it was necessary to extend the provision to protect the 40 lakh residents of unauthorised colonies in Delhi from “inhumane” orders.

What is the background of this law (and its amendments)?

Following orders passed by the Delhi High Court and Supreme Court, the Municipal Corporation of Delhi began a sealing drive in 2006 against unauthorised constructions in the city. The drive, which targeted lakhs of residents of 1,731 unauthorised colonies, was politically unpopular — so, the UPA government of Manmohan Singh enacted The Delhi Laws (Special Provisions) Act, 2006 to protect certain kinds of unauthorised constructions for a period of one year.

Thereafter, the protections were extended one year at a time until 2011, through amendments passed by Parliament. In 2011, The National Capital Territory of Delhi Laws (Special Provisions) Second Act came into force, which gave protections for a period of three years until December 31, 2014.

Since then, the NDA government has amended the Act three times to extend the protections for three years at a time.

What does the amendment passed on Tuesday say?

The amendment replaces the year 2023 with 2026, extending the protections for another three years. Unauthorised constructions up to June 1, 2014 are covered.

In the statement of objects and reasons, the Act says that orderly arrangements have to be made for the relocation and rehabilitation of residents of slums and jhuggi-jhompri clusters, unauthorised colonies, urban villages and farmhouses with construction beyond what is permissible, as per the 2011 Act.



It recalls that The NCT of Delhi (Recognition of Property Rights of Residents in Unauthorised Colonies) Act, 2019 conferred ownership rights to residents of unauthorised colonies, and that development control norms for these colonies were notified on March 8, 2022.

This “process of conferring the ownership rights to the residents of unauthorised colonies and action as per the Development Control Norms for unauthorised colonies is under progress and will take time,” the Act says.

So what happens here onward?

While the protections have been extended for years now, the question remains: how long will the status quo continue, and will there be another extension in 2026?

According to the Minister, the work on conferring ownership rights that started in 2019 was delayed by the Covid-19 pandemic. He told Lok Sabha that about 40-50 lakh individuals live in unauthorised colonies, which means 8-10 lakh households could be eligible for ownership rights.

So far, only 4 lakh registrations have taken place, and conveyance deeds have been issued in just 20,881 cases. “Clearly more work needs to be done,” the Minister said.

The draft Master Plan Delhi-2041 is in the “final” stages, and once notified, it will have details of development norms for unauthorised colonies, slums etc, he added. The Master Plan was passed by the Delhi Development Authority and sent to the Ministry of Housing and Urban Affairs for approval in April this year.

DHARAVI REVAMP IN TURMOIL

The story so far:

On December 16, wielding flags and banners bearing slogans like “Remove Adani, Save Dharavi”, thousands of protesters led by Opposition parties in Maharashtra marched towards billionaire Gautam Adani’s Mumbai office to express their dissent against the ₹23,000 crore Dharavi Redevelopment Project.

Dharavi, Asia’s largest slum cluster, and the third largest in the world, is home to nearly 58,000 families who migrated to India’s financial capital from across the subcontinent over decades. It stands on a 300-hectare slice of prime land in the heart of the city overlooking the Bandra-Kurla Complex (BKC), India’s premium business district.

What is the Dharavi Redevelopment Project?

For almost two decades, the Maharashtra government has been struggling to find a ‘perfect’ bidder, who can take up the challenge of rebuilding a ‘city within a city’ by relocating all the slum-dwellers and their businesses till the redevelopment is finished.

In 1999, the BJP-Sena government first proposed to redevelop Dharavi. Later in 2004, the Congress government led by the late Vilasrao Deshmukh formed the Dharavi Redevelopment Authority under the Slum Redevelopment Authority (SRA) intending to make Mumbai, a slum-free city.

However, the project never got off the ground due to various reasons. According to SRA, 48.35% of Mumbai’s population lives in slums which occupy about 24% of the city’s area.



Over several years, global tenders were floated in 2007, 2009, 2011, 2016, 2018 and 2022. The number of applicants varied significantly, ranging from 101 in 2007 to none in some instances.

Finally, in November of last year, Adani Properties Private Limited successfully secured the 259-hectare redevelopment project through competitive bidding. The conglomerate quoted ₹5,069 crore for the project, while the DLF Group submitted a bid of ₹2,025 crore.

The redevelopment plan is an integrated development approach of the residential, commercial, and industrial with a floor space index of over 4.

What is the new controversy?

In November 2018, the State government under the leadership of the then Chief Minister Devendra Fadnavis approved a new model for redeveloping the slum.

Although a Dubai-based consortium - Seclink Technologies Corporation - successfully bid against Adani in January 2019, the tender was not awarded due to the decision to incorporate 47.5 acres of Railway land into the redevelopment project.

In October 2020, the Maharashtra Vikas Aghadi (MVA) government, led by Uddhav Thackeray, annulled the tender, citing plans to issue new tenders soon. The MVA government stated that one reason for cancelling the tender was the delay by the Centre in transferring the critical railway land necessary for the project.

After the Eknath Shinde government came to power, Union Railway Minister Ashwini Vaishnaw and Deputy Chief Minister Mr. Fadnavis, on October 18 last, signed a 'definitive agreement' for handing over Railway land in Dadar for the project.

The Seclink Technologies Corporation launched a legal battle alleging the State government improperly cancelled an original 2018 tender for the slum redevelopment and favoured Adani Group in giving the new contract.

Even Mr. Thackeray and several Opposition leaders accused the government of giving undue favours to Adani Group in allotting and executing the slum overhaul contract.

In November, the Congress alleged that the BJP government is "benefitting" Adani Group by relaxing norms for the Dharavi redevelopment project with the party's general secretary (communication) Jairam Ramesh alleging that the Maharashtra Urban Development Department, which had originally expressed its reservations about relaxing the rules, "has been compelled to issue a notification that removes the provision of indexation in Dharavi's real estate Transferable Development Rights (TDR), and made it mandatory for all Mumbai builders to buy the first 40% of their TDRs from Adani".

What happened on December 16?

Shiv Sena (UBT) leader Mr. Thackeray led a march with thousands of demonstrators from the slum to Mr. Adani's office alleging that the government is favouring the conglomerate and cited suspicious decisions, including TDR sale clause benefiting Adani Group significantly.

The decision to lead a march was announced on December 5.



Expressing concern over the future of the residents, the former Chief Minister said: “Enough information is available about the Dharavi redevelopment project which raises suspicion about whether the government is trying to benefit Adani at the cost of Dharavi residents.”

Mr. Thackeray said that he is not against development and advocated his stance that he is not ‘pro-builder’, the reason for the downfall of his government in June last year.

“Now one can understand who financed the toppling of my government. With the Shiv Sena around, the BJP could not help its friends; so my party was broken and its symbol was stolen,” he said while addressing the protesters. He alleged that the redevelopment project involves TDR irregularities worth over ₹100 crore.

He said that there is a need for fair treatment during redevelopment and the government should give 500 sq.ft houses for Dharavi residents, including police personnel, conservancy workers, and mill workers, and also a financial centre in the area. He also suggested that the redevelopment should be carried out by the government.

The government aimed to offer 300 sq.ft houses for free to residents with evidence of their slum structure’s existence before January 1, 2000. For those who established residency in Dharavi between 2000 and 2011, the houses were made available at a designated price.

The Dharavi assembly constituency is represented by Mumbai Congress President Varsha Gaikwad.

What is BJP and Adani Group’s stance?

Mumbai BJP president Ashish Shelar said the tender as well as TDR details of the project were finalised by the Thackeray government, which was in power between November 2019 and June 2022.

“The conditions of the tender for the development of Dharavi and the tender itself were both prepared when Mr. Thackeray was the Chief Minister,” he said.

The official spokesperson of the project from Adani Group, too, claimed that the tender conditions were finalised during the tenure of the MVA government. “Conditions, including the obligations and incentives, which were known to all the bidders, have not been changed for the awardee post the tendering process. Hence, it is wrong to claim that any special benefits have been given to the awardee,” they said in a statement.

“It is unfortunate that a concerted effort is being made to disseminate misinformation about certain aspects of the project. It is reiterated that all eligible tenement holders will be provided with a key-to-key solution, which means they will move into their new homes in Dharavi itself,” the statement said.

As per the tender conditions, even ineligible tenement holders will be provided accommodation under the Rental Housing Policy. The tender provisions also ensure that eligible residential tenements will receive 17 % more area than other SRA projects in Mumbai. Further, the generation and usage of TDR are as per the tender conditions and fully compliant with the relevant laws.

“Moreover, the resettlement of Dharavikars is not affected by TDR,” it said.



Also, the TDR from the project will be managed and monitored transparently through a specially created portal by the Municipal Corporation of Greater Mumbai (MCGM) and the Maharashtra government. “The State government has entered into a 99-year lease agreement with the Indian Railways, and then it will be subleased on 30 years + 30 years basis like any other government land in Mumbai to the housing societies. There is no change in this policy for the Dharavi Redevelopment Project,” it further said.

The spokesperson said that the project assumes added significance because many earlier attempts have failed to deliver. “It is against this backdrop that the Adani Group has taken up the challenge and the responsibility of transforming Dharavi with all the above facilities.”

What is the current status of the project?

In September, the DRP and Adani Properties formed a Special Purpose Vehicle (SPV) called the Dharavi Redevelopment Project Pvt Ltd (DRPPL). The developer holds 80% equity in SPV and the State government will hold the remaining 20%.

The chairman/chairperson of the SPV will be appointed by the government, and the managing director will be appointed by the Adani Group. Both positions are still vacant.

Upon assuming responsibility, the team’s initial objective will be to formulate the master plan for the redevelopment and conduct a survey. The deadline for submitting the master plan is set at 150 days. This plan will provide comprehensive information about the designated areas for rehabilitation buildings and free sale buildings, along with the positioning of public amenities such as schools, hospitals, gardens, and playgrounds.

The masterplan and survey reports will be submitted to the government which will take a final call.

When will the project be finished?

The Maharashtra government is highly optimistic about completing the entire process of rehabilitation and redevelopment in seven years starting next year. However, the developer stated that the period is ‘insufficient’ and sought at least 10-12 years for the entire process to be completed, a source said.

STAYING ALERT

The rapidly increasing spread of the JN.1 variant across the globe has led to the prevalence of this variant, a descendent of the BA.2.86 Omicron lineage, reaching over 27%, marking an eight-fold increase in just a month. First identified in Luxembourg in late August this year, the JN.1 variant has also become the dominant variant in a few countries. The variant is very likely to become the dominant strain globally. Compared with the parent lineage BA.2.86, the JN.1 variant carries an additional mutation (L455S) in the spike protein, which enhances its immune evasion significantly. Like other Omicron sublineages, the JN.1 variant too has high transmissibility. The winter season in the northern hemisphere will thus make it easier for the virus to spread. Despite increased immune escape capability and transmissibility, no major outbreak has been reported so far. Prompted by the presence of the JN.1 variant in most countries and its rapidly increasing spread, the World Health Organization classified JN.1 as a separate variant of interest a couple of days ago; JN.1 was previously tracked as part of BA.2.86 but now accounts for “vast majority” of the BA.2.86 lineage. Based on available limited evidence, the global health body has noted that



JN.1 is not associated with increased disease severity compared with other circulating variants. Evidence from countries that have reported a surge in cases and hospitalisations driven by the JN.1 variant does not suggest higher fatality.

Though the first COVID-19 case caused by the JN.1 variant was detected in Kerala during routine surveillance, Goa has reported the greatest number of cases so far — 19. India has so far reported 21 JN.1 cases in all. All the 21 cases have been clinically mild, requiring home isolation. In the last fortnight, India has registered a sharp increase in the number of COVID-19 cases. While universal masking should surely not be made mandatory at this point in time, it is highly desirable that high-risk individuals mask up especially in poorly ventilated closed spaces as COVID-19 deaths in people with comorbidities are still being reported in India. In a welcome move, all patients with influenza-like illness (ILI) and severe acute respiratory infections (SARI) are being tested for COVID-19, and positive cases are sequenced as part of the revised surveillance guidelines. Likewise, there should be sustained focus on genome sequencing for novel variants. Finally, India should learn from past mistakes and refrain from shaming States that report more cases and/or novel variants. States that have better surveillance and display greater integrity in testing and reporting are bound to register more cases. Public health should neither be communalised nor politicised.

WHO PREQUALIFIES A MALARIA VACCINE BY SERUM INSTITUTE

The World Health Organization (WHO) on Thursday added the R21/Matrix-M malaria vaccine, developed by Oxford University and manufactured by Serum Institute of India, to its list of prequalified vaccines. In October 2023, the WHO had recommended its use for the prevention of malaria in children.

The R21 vaccine is the second malaria vaccine prequalified by the WHO.

“The prequalification means larger access to vaccines as a key tool to prevent malaria in children, with it being a prerequisite for vaccine procurement by UNICEF and funding support for deployment by Gavi, the Vaccine Alliance,” the WHO said in a statement.

It added that both vaccines have been shown to be safe and effective in clinical trials, for preventing malaria in children.

Malaria, a mosquito-borne disease, places a particularly high burden on children in the African region, where nearly half a million children die from the disease each year. In 2022, there were an estimated 249 million malaria cases in the world, and 6,08,000 malaria deaths across 85 countries.

Rogério Gaspar, director of WHO’s Department of Regulation and Prequalification, said: “Achieving WHO vaccine prequalification ensures that vaccines used in global immunisation programmes are safe and effective within their conditions of use in the targeted health systems.”

AWARDS FOR WORDS

Literary borders should be porous and the Sahitya Akademi awards, which have been honouring writers of 24 Indian languages down the years, should be seen in that light. This year the Akademi has picked nine books of poems, six novels, five short stories, three essays and one literary study in Dogri, Gujarati, Kashmiri, Manipuri, Odia, Punjabi, Rajasthani, Sanskrit, Sindhi, Assamese, Bodo, Bengali, Telugu, Malayalam, Kannada, Santali and others. It is a prize to be welcomed just for the

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sheer linguistic diversity it acknowledges in a country where there is a change in dialect every few square kilometres, and no dearth of marginalised communities or languages facing extinction. The possibilities are immense: in a country where not everyone has the ability to whip up a PR frenzy, a Sahitya Akademi award is encouragement to keep pursuing the craft; writers can expect to see a rise in sales and be taught in schools and universities; and readers can hope to discover some hidden gems. Writers also have the opportunity to be translated into other regional languages, and into English too. Neelum Saran Gour, who has won this year for her English novel, Requiem in Raga Janki, which had also bagged The Hindu Fiction Prize in 2018, can look forward to her story being translated into other Indian languages.

However, it is a pity that the Sahitya Akademi awards, first conferred in 1955, do not have top-of-the-mind recall such as the Booker Prize or the Pulitzer. The National Academy of Letters was established in 1954 and its stated goal was to be “the central institution for literary dialogue, publication and promotion in the country and the only institution that undertakes literary activities in 24 Indian languages, including English”. To that end, the Sahitya Akademi does hold lectures, readings, discussions, exchange programmes, and workshops, including all communities, but it is so woefully promoted that few get to know of the programmes. Though the Sahitya Akademi award is the pinnacle, there are other awards such as the Bal Sahitya award, the Yuva Puraskar and the Bhasha Samman or translation prize. But not enough is being done to promote its activities. The Akademi’s website is not updated and is bristling with grammatical errors; its social media presence is abysmal. It has brought out thousands of books, but the fact is that the publications, though affordable, are hard to come by. At a time when children particularly are glued to screens and losing their reading habits, the Sahitya Akademi with its extensive network should do more to spread the word about India’s rich literary tradition.

CYBERTHREATS: CENTRE SETS UP SECURE E-MAIL NETWORK FOR STAFF OF CRITICAL DEPARTMENTS

In the wake of cyberattacks, the Centre has set up a secure e-mail network for 10,000 users in critical Ministries and departments, a senior government official has said. The e-mail system that works on Zero Trust Authentication (ZTA) has been designed by the National Informatics Centre (NIC).

“User name and passwords are not enough; now a two-factor authentication has been activated. Other than passwords, facial recognition or biometrics is required. The log-in and log-out times are recorded and monitored,” the official said.

The measures to strengthen cybersecurity come in the wake of multiple cyberattack attempts to target critical installations and government websites such as the November 23, 2022 cyberattack at the All India Institute of Medical Sciences in the national capital. The attack crippled the servers and e-hospital services for more than a month.

However, in February this year, Digital India Corporation (DIC), a not-for-profit company set up by the Ministry of Electronics and Information Technology (MeitY), invited bids from private players to select cloud service providers to “operate, manage and migrate existing projects as well as future projects.” The DIC is currently working on various projects of national importance such as Digilocker, Poshan Tracker, MyScheme, Umang, APISetu, NCW, Kisan Sarathi, Academic Bank of Credits, etc., which run on cloud services provided by Amazon Web Services.



The scope of the bid also included migrating the e-mail services of government employees to a private player, currently handled by the NIC. Though the government did not make any announcements, the Hindustan Times reported on September 12 that the government has selected Chennai-based business solutions provider Zoho to handle the e-mail services.

The NIC has also implemented an e-office with government offices being encouraged to go fully digital. The e-office has been adopted fully in 75 Ministries.

WILL YOUTUBE BE A GAMECHANGER?

With several high-profile journalists ditching the newsroom in favour of social media platforms, and politicians from the Prime Minister onwards going online to connect with the public, TV channels are no longer the go-to place for election coverage

It was an extraordinary moment in Indian history when the Prime Minister went live on his YouTube channel this September, and asked netizens to like and subscribe to his channel. It marked a shift in the contours of India's information ecosystem.

No longer could the Prime Minister rest assured, confident that his message would reach the masses if he spoke to a news channel. He knew the audience had moved away from the dozens of noisy TV channels that had grabbed eyeballs until recently.

Just before the recently-held Assembly elections to five States, the INDIA political alliance released a list of TV anchors they had boycotted. Letting go of the opportunity to be on national TV would have been unthinkable a few years ago. Not anymore.

At the heart of this revolution is video sharing platform YouTube and the manner in which it has emerged as the favourite medium for spreading political information. The signs were obvious a few months earlier when a clutch of Union Ministers gave interviews to a well-known YouTuber. "What's the size of your shoe," was one of the questions posed by Samdish Bhatia to Telangana's then IT Minister K.T. Rama Rao in the middle of election season. It was the equivalent of actor Akshay Kumar asking Prime Minister Modi how he ate mangoes in a 2019 interview. In this case, Bhatia is just a YouTuber albeit with a million subscribers.

The big audience shift

Why should India's politicians speak to YouTubers who are armed with nothing more than a tripod, a smartphone and a mic? Yes, some of them have better equipment and lighting but they are not a patch on newsrooms with dozens of journalists, cameramen, lighting specialists, graphic designers, make-up artistes, and data crunchers who are at the heart of operations of TV channels.

It's because the audience has shifted. "It is making a difference. One of the technical problems with news channels is that they are forced to give out news 24/7. They stretch the story. The advantage with social media is that you can say just what and how much you want to say. This gives social media platforms an edge over news channels," says Dhruv Rathee, arguably one of the country's pioneers in using YouTube for political awareness. He has 14 million subscribers on the platform — an audience the size of the population of Kolkata — who get notifications whenever he posts a video, and some of whom pay a small sum to subscribe to his channel. Imagine a multilingual visual Wikipedia where the speaker switches between Hindi and English and dissects facts.



The trend probably caught on when Rahul Gandhi, earlier this year, sat down for brunch and an ice cream with a YouTuber called Curly Tales. The video, released on January 22, is 32.20 minutes long, and is cut into 25 sections. The viewer can choose which segment to watch and post on their social media handles.

Catering to Gen Z

While in past elections, salty, abrasive, cheap and low is the direction political messaging has taken, the flavour now is conciseness, humour, wit and sharp delivery that caters to the truncated attention spans of smartphone addicts.

“News through social media works, if you know how to weed out all the false information, and is a great way to catch up on current events happening all over the world,” says Hanna Nasim, a student. “It comes in shorter bites and more visuals instead of long paragraphs that wind up nowhere,” she says, speaking for a generation growing up with technology.

It is this generation that former news anchor Sakshi Joshi targeted when she quit her job and started her own channel sometime in 2020. “I started meeting students and bringing up their issues. Live sessions with students gained traction. I raised the issues of farmers and I realised there was a demand for what I was doing,” says Joshi, who has earlier worked with BBC, Network 18, News 24 and India TV.

Unfettered by the needs and demands of advertisers and corporate minders, YouTube has proved to be the perfect platform for several news journalists. “People are turning to us. Journalists are adding to the credibility of YouTube and people trust us more than they do news channels. It is a paradigm shift,” says Joshi whose channel now has 1.26 million subscribers.

“Technology is changing and is now targeted towards the youth, most of whom have cellphones,” says Thulasi Chandu, an independent journalist who began her YouTube channel “without a mic, tripod or lights”. Five years down the line, her channel is powerful enough to rattle the powers that be. “You can go digital in a minute. All the political parties approached me with offers before the elections. But I rejected all of them. My viewers have paid for the stories I do. I didn’t want to break that trust,” says Chandu, who had to seek police protection after being subjected to doxxing — the revealing of an individual’s personal information on public platforms. Since starting her channel three years ago, she has been at the receiving end of a barrage of hateful comments and trolling, even death threats.

Regulations soon

The recent elections showed how streaming platforms have become key to building the election narrative. While the videos have been successful in capturing the nation’s imagination, the unregulated nature of the content is a bone of contention for many. The Broadcasting Services Regulation Bill, 2023, which will replace the existing Cable Television Networks Regulation Act of 1995, seeks to bring over-the-top (OTT) and digital news platforms under its ambit.

According to the Information & Broadcasting Ministry, the bill “seeks to provide for Content Evaluation Committees and a Broadcast Advisory Council for self-regulation, different Programme and Advertisement codes for different Broadcasting Network Operators, accessibility measures for persons with disabilities, and statutory penalties, etc.”

At the helm of the new set-up is the Broadcast Advisory Council, which will have handpicked government servants, including an eminent personality as chairperson, and other officials from

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the Ministries of Information and Broadcasting, Women and Child Development, Home Affairs, External Affairs, and Social Justice and Empowerment, and five independent members nominated by the Central Government. How this organisation will function is anyone's guess.

Norms for OTT platforms include mandatory registration and a Content Evaluation Committee. Violation of terms and conditions will invite stiff penalties ranging from ₹10 lakh to ₹50 crore. "You cannot censor the Internet. Even in China they tried to do it but people find a way to bypass regulations. The laws of the land apply to everyone, even if someone is on YouTube or the Internet. It doesn't need special regulation," says Rathee.

According to data from multiple sources, YouTube had over 450 million active users in India, equivalent to 32.8% of the population, and the exact percentage vote share of the ruling Bharatiya Janata Party in the 2018 general elections.

In the market that is the Indian democracy, the rise of news, analysis and explainers on YouTube is the big transformation as it heads towards the 2024 Lok Sabha elections.

'KASHI TAMIL SANGAMAM IS STRENGTHENING IDEA OF EK BHARAT SHRESHTHA BHARAT'

Prime Minister Narendra Modi on Sunday said in Varanasi that Kashi and Tamil Nadu have been sharing an emotional and creative bond since time immemorial, adding that through the Kashi Tamil Sangamam the idea of 'Ek Bharat Shreshtha Bharat' is getting strengthened.

"The emotional bond shared by the people of Kashi and Tamil Nadu is unique in many ways," Mr. Modi said at the inaugural ceremony of the second edition of the Kashi Tamil Sangamam at the Namoo Ghat. The programme, organised by the Ministry of Education, celebrates, reaffirms and rediscovers the age-old links between Tamil Nadu and Varanasi.

The Prime Minister started his speech by greeting the guests from Tamil Nadu with 'Vanakkam Kashi, Vanakkam Tamil Nadu', and added that reaching Kashi from Tamil Nadu meant coming from one house of Mahadev to the other.

Mr. Modi said the Sangamam was unique in many ways and this confluence signified India's cultural foundation. Simultaneous Tamil translation of Mr. Modi's speech was done through Bhashini, an artificial intelligence-based language platform launched by the government in 2022, for those in the audience who understood Tamil.

Highlighting how saints from southern India visited Kashi for centuries, the Prime Minister added, "Our country is united by saints such as Adi Shankaracharya and Ramanujacharya, who awakened the national consciousness among people through their journeys. India remained immortal as a nation for thousands of years due to this."

He hailed the Sangamam for establishing itself as an effective platform for mutual dialogue between people of north and south. "Banaras Hindu University [BHU] and the Indian Institute of Technology [IIT] Madras joined hands for the success of the Sangamam," said Mr. Modi.

Sengol installation

Pointing towards the installation of the Sengol in the new Parliament building, Mr. Modi said, "Feeling of Ek Bharat Shreshtha Bharat was visible when we entered the new building of Parliament where the holy Sengol has been installed. Diversity is rooted in our consciousness, despite that Indians are one." Uttar Pradesh CM Yogi Adityanath and Union Minister Dharmendra

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Pradhan were also present at the inauguration that had roughly 1,400 participants from Tamil Nadu and Puducherry.

MISSING FOR 42 YEARS, NAMDAPHA FLYING SQUIRREL RESURFACES IN ARUNACHAL PRADESH

The arboreal mammal shares habitat with the similar red giant flying squirrel for which it could have been mistaken; a team from Assam conservation group sighted the squirrel in April 2022

A nocturnal flying squirrel has resurfaced in Arunachal Pradesh after going missing for 42 years.

The Namdapha flying squirrel (*Biswamoyopterus biswasi*) was last described in 1981 based on a single individual found in the 1,985 sq. km. Namdapha Tiger Reserve in Arunachal Pradesh's Changlang district.

The failure of zoologists to locate the arboreal mammal during several expeditions thereafter generated two theories — that it could have been mistaken for the very similar red giant flying squirrel (*Petaurista petaurista*) sharing the same ecosystem or worse, become history.

Ten of these expeditions were by teams from Aaranyak, an Assam-based biodiversity conservation group, for a total of 79 days in 2021. A team from the group finally sighted the Namdapha flying squirrel in April 2022.

The team led by Firoz Ahmed included Sourav Gupta, a field researcher, and Sourav Mardi, a volunteer. Tajum Yomcha, a research officer with the Arunachal Pradesh Forest Department, aided the search for the elusive species.

"We sighted a small reddish and grizzled furry mammal high up on a tree. After months of scrutiny of the photographic evidence we gathered, experts are pretty much sure that the animal is the Namdapha flying squirrel," Mr. Ahmed said.

Study to collect DNA

The team members said they are designing a study to collect DNA samples of the squirrel in the field for comparing the genetic material with the DNA of the individual collected in 1981, stored at the Zoological Survey of India in Kolkata.

"If the animal sighted during our last expedition is established as the Namdapha flying squirrel, it will be a powerful flagship for conservation for both the tiger reserve and other wildlife species found here," Mr. Ahmed said.

INDIA'S FIRST WINTER ARCTIC EXPEDITION BEGINS; RAMAN RESEARCH INSTITUTE TEAM TO HOLD STUDY

The institute said on Monday, the day when Earth Sciences Minister Kiren Rijiju flagged off the expedition, that its researchers would examine the characterisation of the radio frequency environment in the Svalbard region of the Arctic in Norway. The survey will help astronomers assess the suitability of this uniquely located region for carrying out precision astronomy measurements.

India has been running its own research station, Himadri, in Svalbard since 2008. The winter expedition is a bid to maintain a year-long presence at the station. A team of four scientists will

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embark on the journey on Tuesday to India's research station in Alesund town on the Brogger peninsula, where research institutes from 10 countries have laboratories.

The RRI team was selected as the first batch of scientists who will conduct experiments spanning astronomy, climate change and atmospheric science.

Girish B.S., from the Electronics Engineering Group at the RRI, has been designated as the team leader for this batch.

The institute said the survey of the radio frequency environment had never been done before at the site and could potentially open avenues for deploying low-frequency radio telescopes in the region.

The month-long scientific expedition is being funded by the Earth Sciences Ministry. The National Centre for Polar and Ocean Research, Goa, is the nodal agency spearheading the expedition, which will go on till January 15.

For nearly a decade now, engineers and scientists at the RRI have been working on the development of the shaped antenna measurement of the background radio spectrum (SARAS) series of experiments. SARAS aims to study the faint cosmological signal from hydrogen, commonly referred to as the 21-cm signal, emerging from the cosmic dawn and the epoch of reionization.

Cosmic dawn denotes the period when the first stars and galaxies were born in the universe. These are the two vital phases that the universe underwent during its early stages of evolution several billions of years ago. These periods in cosmic history are not well understood due to a lack of observations.

"Due to rampant urbanisation in recent years, the space for the deployment of scientific experiments for cosmological studies is fast shrinking. Several places where low-frequency astronomical observations were conducted in the past, are no longer suitable for carrying out precision measurements. And the biggest limitation in achieving the required sensitivity is RFI," Mr. Girish said.

Sensitive electronic instruments will be used to study the incoming radio signals in the frequency range of 5-500 megahertz (MHz) at the accessible sites in the vicinity of Himadri.

IN MEHRAULI, A MUGHAL-SPONSORED TEMPLE IS A TESTAMENT TO DELHI'S SYNCRETIC ROOTS

From a Mughal-sponsored structure to a concrete building, the Yogmaya Temple in Mehrauli is a historically important monument believed to be standing at the site of an ancient temple that is said to have come up during the period of the Mahabharata but of which no trace exists anymore.

A noble in the court of Mughal Emperor Akbar II by the name of Lala Sidhu Mal built the temple between 1806 and 1837. The area was known as Yoginipura in ancient Jain texts and Prithviraj Chauhan himself was said to have patronised a Yogini temple here shortly before his city's destruction. Lala Sidhu Mal, also known as Sed Mal, built his temple on the site where an ancient Yogini Temple is believed to have existed.



Today, parts of the structure built in the 1800s can be seen on the site of the temple before it was renovated in the 1960s. It now stands as a dilapidated building, with the walls of the structure worn out and full of cracks, and paint peeling off.

LOOKING FOR BHAGAT SINGH: LETTERS FROM JAIL, A LOST PHOTO STUDIO, A STATUE IN PARLIAMENT

On April 8, 1929, Singh and Batukeshwar Dutt, members of the radical Left group Hindustan Socialist Republican Association (HSRA), had lobbed two low-intensity bombs in the Central Legislative Assembly, the precursor of today's Lok Sabha or the Lower House of the legislature of British India. They also raised slogans of "Long Live Revolution" and "Down with Imperialism" and flung pamphlets that quoted French anarchist Auguste Vaillant to say, "It takes a loud voice to make the deaf hear".

Last week, as two men jumped from one of the visitors' galleries in the new Parliament's Lok Sabha and sprayed from gas canisters, there were echoes from that past – the six arrested in the case had, while saying their action was meant to draw the government's attention to unemployment and the Manipur unrest, among other issues, invoked Bhagat Singh and called themselves members of his fan club.

Now, in the tense aftermath of last week's incident, security officials at Parliament are on the edge, with visitor access being strictly monitored. The old Lok Sabha chamber, the scene of Bhagat Singh's daringly subversive act that sent him to the gallows and to dizzying popularity thereafter, remains out of bounds behind tall doors and thick curtains.

Remarkably for someone whose active political years barely lasted a few years — of which he spent the last two in jail and some more in hiding – before he was executed by the British colonial government on March 23, 1931, Singh is among the most celebrated revolutionaries of the freedom movement. He straddles a rather polarised political landscape, courted by both the Left, Right and those in between, and finds resonance among anyone looking a cause, from farmers seeking MSP to unemployed youth, from those invoking him for his "courage" and "desh prem" to others who see in his remarkable erudition and breadth of ideas a "thinker" and a visionary".

Almost every conversation on him — from students at Jawaharlal Nehru University (JNU) to academics and authors — veers into a dreamy hypothesis: "Aaj agar Bhagat Singh hote toh (if he had been around)..."

'MEDIUM HEIGHT... SMALL BEARD AND MOUSTACHE'

On the first floor of the Department of Delhi Archives in South Delhi is the Bhagat Singh Archives and Resource Centre, a storehouse of archival wealth and once-proscribed literature on Bhagat Singh. The 1,700-odd books and documents are all donated by Dr Chaman Lal, former professor of Hindi translation at JNU and the man who has made it his life mission to collect every available piece of record on Bhagat Singh.

Somewhere in between the pages of these carefully archived documents and books stored in steels almirahs, Bhagat Singh comes alive. Born in 1907 in a Sikh family of landlords in Lyallpur in Faisalabad in present-day Pakistan, Singh was the second of nine children of Kishan Singh and Vidyawati. Inspired by his uncle Ajit Singh and father Kishan Singh, both Congressmen who played key roles in the nationalist movement, Singh was, by his teenage years, already a "well-known suspect" in police records.

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In its report in 1926, the Criminal Intelligence Department describes him as someone of “medium height; thin oval face; fair complexion; slightly pock-pitted; aquiline nose; bright eyes; small beard and moustache”.

His Naujawan Bharat Sabha that he founded in March 1926 and the HSRA, an organisation that took its inspiration from socialist ideologies and movements in Russia and Ireland, unleashed a string of revolutionary action against the British. The most high-profile of these attacks was on December 17, 1928, when Singh and Rajguru gunned down police officer J P Saunders to avenge the death, a month earlier, of Congress leader Lala Lajpat Rai after a police lathicharge on those protesting against the Simon Commission.

With the killing sending Singh and other members underground, the HSRA had limited means to publicise their cause. It was thus that the Assembly attack was devised – as a means to win broader public support in their fight against colonial rule.

In *Without Fear: The Life & Trial of Bhagat Singh*, the late journalist-author Kuldip Nayar writes that Singh and Dutt did a recce of the Assembly two days before the attack. “They wanted to ensure that the bombs they threw did not hurt anyone... A few minutes before the session began on April 8 at 11, (they) sneaked in unnoticed... An Indian member of the Assembly gave them passes at the entrance and disappeared,” Nayar wrote.

Then, just as (Assembly President) Vithalbai Patel rose to give his ruling on whether or not the House should proceed with the discussion on the Public Safety Bill, a legislation that intended to curb the activities of socialists and communists, Singh and Dutt lobbed their bombs.

Singh and Dutt were arrested and the former’s link to the Saunders murder case established. At the end of a two-year trial in what came to be known as the Lahore Conspiracy Case, Singh, Sukhdev and Rajguru were sentenced to death.

In the handwritten letters that Singh wrote from jail – one from Lahore Central Jail asking his friend Jaidev to “arrange to send a fleet foot shoe...No. 9-10 will do”; a petition to the Punjab Governor asking to be “shot dead instead of hanged”; his moving last letter to his younger brother Kultar Singh, asking him to take care of his health and study well – are fleeting images of a man with a remarkable sagacity that’s way beyond his age. A few months before his execution, while in jail, Singh wrote his seminal essay, ‘Why I am an Atheist’, in response to his friends’ belief that there was a “certain amount of vanity that actuated” his disbelief.

In a powerful letter dated October 4, 1930, Singh writes to his father Kishan Singh, protesting against his move to seek clemency for him during the final stages of the trial. “I was astounded to learn that you had submitted a petition to the members of the Special Tribunal in connection with my defence. This intelligence proved to be too severe a blow to be borne with equanimity... I fear I might overlook the ordinary principle of etiquette and my language may become a little harsh while criticising or rather censoring this move on your part. Let me be candid. I feel as though I have been stabbed at the back. Had any other person done it, I would have considered it to be nothing short of treachery. But in your case, let me say that it has been a weakness — a weakness of the worst type,” he wrote in English.

According to Chaman Lal, whose latest book, *The Bhagat Singh Reader*, is a collection of the revolutionary’s writings, Singh wrote in English, Hindi, Urdu and Punjabi. He was also known to be “well-versed” in Sanskrit and Bengali and was learning Persian in jail.



Lal says that it's this facet of Bhagat Singh that he has been working to highlight. "I have been trying to project the thinker-revolutionary side of him. Age has little to do with intellectual capacity. He was just 20-21 when he wrote and engaged with all these ideas. So far, only the courage part of his personality has been highlighted," he says.

Prof S Irfan Habib, historian, whose works on Bhagat Singh, including *To Make the Deaf Hear* and *Inquilab*, are among the few mainstream academic works on the revolutionary, attributes Singh's erudition to a practice he considers essential to scholarship – reading.

"Bhagat Singh read extensively. His mother Vidyavati would scold him because he would stuff his pant pockets with books and end up tearing them," says Prof Habib, adding that it was his scholarship that set Bhagat Singh apart. "Why is it that everyone talks about Bhagat Singh, not Sukhdev and Rajguru so much? They were all equally courageous... What set Bhagat Singh apart were his ideas and thoughts".

Jatindernath Sanyal, who was acquitted in the Lahore Conspiracy Case but arrested for Sardar Bhagat Singh, Singh's first biography that was immediately proscribed, writes that while facing trial in the Special Magistrate's Court, "Bhagat Singh began to read aloud to us the beautiful novel, Leonid Andriev's *Seven That Were Hanged*." Sanyal lists books by Upton Sinclair, *Eternal City* by Hal Caine, "from which many speeches by Romily he had learnt by heart", Reed's *Ten Days that Shook the World*, Ropshin's *What Never Happened*, *Mother* by Maxim Gorky, *The Career of a Nihilist* by Stepniak, Oscar Wilde's *Vera Or*, *The Nihilists*, and Kropotkin's *Memoirs of a Revolutionist*, as among Singh's "favourites".

THE MAN IN THE FELT HAT

From posters to comics, countless social media fan clubs to Bollywood films – from the Ajay Devgn-starrer *The Legend of Bhagat Singh* to Rakeysh Omprakash Mehra's 2006 cult film *Rang De Basanti* — Singh's life and dramatic end have steadily fed into popular culture.

What then explains the surge in Singh's popularity that started first with the 110-day hunger strike by Singh and his comrades demanding better conditions in Lahore jail and which reached dizzying levels following the secretly carried out execution of March 23, 1931?

Many point to an image of Singh that may have played its part – that of Bhagat Singh in a hat, the only photograph of the man in the initial days after his arrest.

On April 3, 1929, days before they carried out the Assembly attack, Singh and Dutt went to Ramnath Photographers, a studio in Old Delhi's Kashmere Gate area, and posed for photos.

Despite the dangerous nature of his task and the near-certainty that the Saunders case would be traced back to him, a charge he knew would invite him the death penalty, the 21-year-old stares calmly into the camera. Experts now say the image, now a symbol of defiant nationalism, may have been part of a well-calculated plan — Singh and his HRSA comrades knew that the bomb attack would bring them and their cause national and global attention and the photographs would come in handy to illustrate related news events.

Maclean writes that it was Singh's friend Jaidev Kapoor who arranged for the photo to be shot, with a specific instruction to photographer Ramnath: "Our friend is going away, so we want a really good photograph of him."



Maclean further writes that while the initial plan was to collect the photographs before the bomb attack, the studio couldn't get them ready on time. Worse, it turned out that Ramnath was also contracted to take photos for the police and had been called to the police station to take pictures of Singh and Dutt after their arrest on April 8, 1929.

Eventually, the revolutionaries collected the photographs, with Ramnath even handing over the negatives, possibly to avoid attracting police attention.

Maclean says the most striking feature of the photograph, apart from Singh's expression, is his stylish felt hat. "We read into an image what we want to, or what we see. Different scholars have argued that it represents his love of western movies, it represents his taking up and mimicking of western style, that it represents a temporary disguise. His family members who met him before his death say he was like that to his death – an up-to-date young man. The hat, incidentally, he borrowed from a friend, and liked it so much, he never gave it back," Maclean wrote in an email to The Indian Express.

In the Kashmere Gate area of Old Delhi, a search for Ramnath studio hit a dead-end. There was no trace of the photo studio that helped, as Jawaharlal Nehru would say in the days after Singh's execution, the "mere chit of a boy leap to fame".

BHAGAT SINGH'S ANCESTRAL VILLAGE KEEPS HIM CLOSE TO HEART: 'HIS IDEOLOGY STILL RELEVANT...HE STOOD FOR EQUALITY'

Bhagat Singh was born on September 28, 1907, and brought up at Chak 105, Banga village, Faisalabad (now in Pakistan). He never stayed very long at the haveli in Khatkar Kalan, but it is the only house directly linked to him that remains in India following Partition. He was hanged by the British at a jail in Lahore on March 23, 1931, when he was just 23.

The haveli in Khatkar Kalan was built by Bhagat Singh's great-grandfather, Fateh Singh. According to village residents, before Bhagat Singh's birth, his father Kishan Singh moved to Faisalabad.

However, Bhagat often accompanied his grandfather, Arjan Singh, to Khatkar Kalan during school holidays. After Partition in 1947, the family moved back to Khatkar Kalan and Bhagat Singh's mother, Vidyavati, lived in the house alone for a long period. Bhagat was one among her nine children.

The brick haveli still has an old well and a chulha (earthen stove) still intact. It also holds several belongings of the family, such as a typewriter, charkha, oil lamp, old photos, and some utensils.

Outside the ancestral house, on a sprawling lawn developed by the government, sat a group of local residents. Among them was 71-year-old Balwant Singh.

'DUNKI' AND IMMIGRATION: HOW THE FIRST MODERN PASSPORTS CAME TO BE

The recently released Shahrukh Khan-Rajkumar Hirani film 'Dunki' focuses on the issue of immigration. Its title is taken from the term "donkey journey", which refers to the long-winding, often dangerous routes that people across the world take to reach the places they want to immigrate to. These difficult journeys are undertaken due to a lack of requisite legal permits or financial resources.



The film also mentions the fact that visas and passports as we know them today are a relatively modern phenomenon, having been introduced around 70 years ago. Here's a look at the history.

Passports of the past

Passports function as permits and proofs of identity, allowing the residents of one country to travel to another, and documents similar to it have existed for centuries.

In the Hebrew Bible, the Book of Nehemiah says that the ancient Persian king Artaxerxes, in around 450 BC, sent a prophet to Jerusalem but also sent letters with him that requested other governors to grant him safe passage through his journey.

Similar documents were in place in countries such as France and the United Kingdom. In his book *The Passport: The History of Man's Most Travelled Document*, Martin Lloyd writes, "In France, the 'Passport System' had been well established before the French Revolution of 1789. Internal passports for travel from town to town were required as well as overseas passports for foreign excursions."

The French State also used this system to "prevent skilled workers and capital from leaving and deterring troublemakers from arriving," he adds. Further, a foreign traveller to France had to surrender his passport, which would then be replaced with a temporary one for the duration of his stay.

How did modern passports come into existence?

The Indian Ministry of External Affairs' passport services website says that in India, "There was no practice of issuing Indian passports before the First World War." This changed with the First World War (1914 to 1918) when the British government of India enacted the Defence of India Act. Under it, possessing a passport for leaving and entering India was compulsory. It then continued seeing how the practice was in place in other parts of the British Empire.

The World Wars changed the way passports were seen elsewhere too, arising out of a need countries felt to secure their borders and prevent the entry of people seen as enemies. In 1914, the British Nationality and Status of Aliens Act was enacted (where 'alien' referred to a "non-British subject") to "consolidate and amend the Enactments relating to British Nationality and the Status of Aliens". It spoke about the naturalisation of aliens and other laws related to citizenship.

According to the article 'A Brief History of the Passport', published in *The Guardian*, the first modern passport was a product of this Act. Before this, international travel did not require such documents. It carried distinguishing features of its holder – "a photograph and signature", their complexion, etc. The article gives an example of an entry under it – "Forehead: broad. Nose: large. Eyes: small."

A body seen as a predecessor to the United Nations, the League of Nations, also held a conference on the matter of regulating travel through passports in 1920. The Conference on Passports and Customs Formalities sought to have a standard system. The British system then became a common one from here onwards.

The 1920s saw laws on passports from countries such as the US. It was also a period when the country was seeing immigration from China and Japan pick up. A *National Geographic* article notes, "A year later, perhaps recognizing a political opportunity, the U.S. passed the Emergency Quota Act of 1921 and later, the Immigration Act of 1924 limiting the inflow of immigrants. The



emergency? Too many newcomers from countries deemed a threat to 'the ideal of American hegemony.' How to identify an immigrant's country of origin? By a newly minted passport, of course."

In both the US and the UK, at least some residents found the prospect of describing their features and having to attest to their identity uncomfortable. An article in the Smithsonian Magazine says, "Ladies blushed at having to tell their age to a clerk. Gentlemen objected to having their romantic notions of individual character reduced to a generic list of physical traits. Headlines like 'W.K. Vanderbilt Tries to Identify Himself' detailed bureaucratic bothers, and the fact that President Woodrow Wilson needed a passport made front-page news."

Despite their initial intended use as a wartime means of distinguishing between allies and enemies, the passport continues to endure and has solidified as an essential aspect of modern citizenship.



DreamIAS



BUSINESS & ECONOMICS

WHAT CAUSES INFLATION IN INDIA: DEMAND OR SUPPLY ISSUES?

Typically, inflation in India is primarily influenced by factors related to supply but there are times when demand factors also play a significant role, according to an article published by the Reserve Bank of India as a part of their December bulletin. During the two waves of COVID-19, supply disruptions were the main cause of inflation. However, following the Russia-Ukraine conflict, the driving forces shifted predominantly to factors related to demand, the article concludes.

It argues that at the start of the pandemic, lockdowns caused a major decline in production and demand, leading to a steep drop in economic growth. This phase also saw a decrease in commodity prices due to weakened demand. However, as the economy began to reopen with distribution of vaccines and release of pent-up demand, demand recovered more rapidly than supply. This imbalance resulted in rising pressures on commodity prices. The onset of the Russia-Ukraine conflict in 2022 further intensified supply chain challenges and added to commodity price pressures.

Using the Centre for Monitoring Indian Economy's consumer expenditure data, the article tries to find out whether inflation in India is due to factors on the supply side or demand side. When there is an unforeseen shift in both prices and quantities within a month that aligns in the same direction, this approach categorises the inflation for that month as being driven by demand. This means that an increase in demand leads to a rise in both prices and quantities, while a decrease in demand results in a reduction in both. Conversely, inflation is considered to be supply-driven if there is an unexpected change in prices and quantities that move in opposite directions. In this case, a decrease in supply is linked with a lower volume but an increase in price, and vice versa.

Using the above methodology, analysis of data from January 2019 to May 2023 suggests that categories such as vegetables, oils and fats, milk, eggs, pulses, and sugar frequently experience supply-side constraints. In contrast, items like non-alcoholic beverages, personal care products, and health-related goods are mainly affected by demand-side factors, as illustrated in Chart 1. Chart 1 shows the percentage contribution of demand and supply factors to Consumer Price Index (CPI) sub-groups level inflation in the given period.

In the next step, demand and supply factors at the sub-group level were combined using the CPI weights to assess overall headline inflation. The analysis reveals that inflation was mainly driven by supply factors during October 2019-January 2020 (due to excess rainfall causing supply disruptions), throughout the various stages of the pandemic (restrictions and supply chain issues) and at the beginning of the Russia-Ukraine conflict (supply shortages and spikes in global commodity prices). On average, supply-side factors accounted for about 55% of the CPI headline inflation from January 2019 to May 2023. Chart 2 shows the contribution of demand and supply to CPI Inflation excluding housing, each month, between January 2019 and May 2023.

In contrast, the impact of demand-side factors on headline inflation decreased during the COVID-19 crisis, dropping to 27.1% in 2020 from 41.5% in 2019. However, the significance of demand-side factors in driving inflation saw intermittent increases post the COVID-19 waves when restrictions eased and after the Russia-Ukraine conflict started, notably contributing to the peak in headline inflation in April 2022. Over the entire period from January 2019 to May 2023, the contribution of demand drivers to inflation stood at 31%.



A CLOUDY HORIZON

From a rare upward swing this October, India's goods exports retreated into contraction last month, dipping 2.8% from 2022 levels to touch \$33.9 billion. Imports dropped 4.33% to \$54.5 billion, cooling the merchandise trade deficit to \$20.6 billion, almost a third below October's record high. Sequentially, the decline in imports was sharp, despite the Commerce Ministry lowering October's import bill by \$1.6 billion from the initial \$65 billion estimate. On the other hand, though exports contracted in November, they were higher than October's tally, which was the lowest in 12 months, yet denoted a year-on-year uptick unlike in November. Such statistical noise may be hard to listen through, but it is clear that exports have recorded their weakest values in a year, over the last two months. Similarly, the significant dip in imports in November can be attributed to factors like a decline in discretionary demand for high-value goods such as gems and jewellery and the global dip in prices of key items like petroleum products. Economists expect the deficit to stay range-bound between \$20 billion and 25 billion through the remaining four months of the year. But it is difficult to be certain — one may recall that imports had hit an 11-month high of \$60.1 billion in August before easing over 10% in September and resurging in October.

Making sense of such divergences, with a yo-yo effect of sorts every other month, is hazardous, and is exacerbated by significant data corrections that have returned after a few months of relative certainty. August's goods trade deficit was moderated by nearly three billion dollars, with the overall export-import tally seeing revisions of \$5 billion. The magnitude of upward revision in the monthly merchandise trade deficit has averaged around \$1.5 billion since July compared to an average of \$0.5 billion in the first quarter of 2023-24, a QuantEco research note has flagged. At the risk of repeating the obvious, the government must get a better grip on the data it bases its decisions on. Officials hope for an uptick in exports in the final quarter of the year, citing similar trends in recent years. With the World Trade Organization expecting global trade flows to strengthen in 2024 and the US Federal Reserve signalling interest rate cuts that other central banks would take a cue from, global demand may perhaps look up more consistently. But to capture that, India needs to do more to compete with rivals. For instance, a rough government-commissioned study on logistics costs indicates they dropped a little over the past decade. Ongoing infrastructure spends may gradually lower them further, but reducing petroleum prices for users, in tandem with global trends, would boost competitiveness far more effectively.

UNEMPLOYMENT REMAINS A CONCERN POST-PANDEMIC

Last Wednesday, two men entered the Lok Sabha and sprayed yellow gas from canisters, while two others stood outside Parliament and shouted slogans and sprayed gas from similar canisters. The intruders told the police that they were protesting against the government's inability to tackle unemployment.

A detailed news report published in The Hindu stated that all the four persons were either not employed or were unhappy about their employment status. D. Manoranjan, who opened a canister inside the Lok Sabha, was helping his father in the sheep-breeding and poultry business after completing a course in Computer Science Engineering. Sagar Sharma, who accompanied Manoranjan, was forced to drop out of school after higher secondary due to his family's financial difficulties and was driving an autorickshaw, according to his parents. Neelam Verma, who protested outside Parliament, used to talk regularly about unemployment and other issues plaguing the poor. Neelam, who holds an M.Phil in Sanskrit, was a government job aspirant from Haryana. Her mother said, "Neelam would often say it is better to die as she could not find a job



despite having studied so much.” Amol Shinde, who was with Neelam, had complained to his parents that the COVID-19 lockdown had killed his chances of getting into the Army. He has been trying to clear the police recruitment exam since then.

A look at employment-related indicators published by the Centre for Monitoring Indian Economy (CMIE) shows that they worsened in the post-pandemic period. The Labour Force Participation Rate (LFPR), is the share of the working age population which was either working or seeking employment. In FY23, the overall LFPR in India was 39.5%, the lowest since at least FY17, including the pandemic years. Among men, it was 66% and among women, it was 8.7% — both the lowest since at least FY17. So, an increasing share of Indians in the working age were neither employed nor willing to seek employment even after the pandemic.

“India’s LPR displayed a consistent downward trend in the last seven years. Surprisingly, a bulk of this decline was witnessed before the pandemic itself, with the pandemic only exacerbating the situation,” CMIE wrote in June this year.

The UR was 7.6% in FY23, higher than pre-pandemic levels.

The data show that fewer people of working age were looking for jobs, of which a relatively high share of people were unemployed.

This trend continued even if the latest available quarter-wise data was considered. Table 3 shows the LFPR and UR for all the quarters ending September between 2016 and 2023. The overall LFPR was about 7 percentage points lower in 2023 than it was in 2016. Moreover, the overall LFPR was slightly lower than the quarters ending September 2020 and September 2021 (7.3% each) — the pandemic-affected periods. More importantly, the UR in the quarter ending September 2023 was 8.1%, much higher than what it was in the quarters ending September 2020 and September 2021 (7.3% each).

This trend continued even if the latest available month-wise data was considered. Table 4 shows the LFPR and UR for all the November months between 2019 and 2023. The UR was as high as 9.2% in November 2023, over one point higher than any November since 2019, including the pandemic months. These figures show that India is in the grip of a persistent unemployment problem.

EXPRESS VIEW ON RESTRICTION OF ETHANOL PRODUCTION: FOOD VS FUEL

Indian agribusinesses have been subjected to a series of policy shocks since mid-2022, from export curbs on rice, wheat, sugar and onions to stocking limits on pulses. More recent is the Centre directing sugar mills not to produce any ethanol directly from concentrated cane juice/syrup. These decisions go against the Narendra Modi government’s previous reform intent and policy initiatives.

The curbs on exports and produce quantities that processors, wholesalers and retailers can stock are a reversal of the letter and spirit of the farm laws, enacted by Parliament in September 2020 and repealed in November 2021. As regards ethanol, mills have invested in new distilleries for producing it straight from cane juice — instead of the leftover molasses after extraction of sugar — purely on the strength of favourable government policy. That included paying a higher price for ethanol made from cane juice, which, unlike through the molasses route, entails total sacrifice of sugar revenues.



The Centre has since modified its original order, with mills now being allowed to produce ethanol using both cane juice and an intermediate-stage ‘B-heavy’ molasses. But this is conditional upon not more than 1.7 million tonnes (mt) of sugar from these two feedstocks getting diverted — fermented and distilled into ethanol — in the ongoing 2023-24 supply year (November-October).

Such diversion amounted to 4.5 mt in 2022-23, 3.4 mt in 2021-22 and 2.2 mt in 2020-21. Less sugar going for fuel (ethanol is blended with petrol) would mean more of it being available for consumption as food. It is similar to the export ban on sugar since May, which was also aimed at augmenting domestic availability of the sweetener. All this comes even as mills have started the new sugar season with six-year-low stocks. Moreover, there are concerns over this year’s production — it may fall below 30 mt, from 33 mt in 2022-23 and 36 mt in 2021-22 — on the back of dry weather in Maharashtra and Karnataka. And with the national elections scheduled in April-May 2024, the Modi government wants to take no chances.

There is a cost to this. The first is to the mills that have spent money, including through borrowed funds, for creating additional distilling capacities. Those being rendered idle would undermine their ability to pay both banks and cane growers. A more serious cost involves policy credibility. The Modi government deserves credit for its national biofuels programme that has led to the average ethanol blending in petrol rising from 1.6 to 11.8 per cent between 2013-14 and 2022-23. The December 7 order on ethanol is almost like the May 13, 2022 notification prohibiting wheat exports. Such bolts from the blue will deter investments in a sector — agriculture — that badly needs them.

MODI INAUGURATES SURAT DIAMOND BOURSE IN GUJARAT, SAYS IT WILL ADD 1.5 LAKH MORE JOBS

Prime Minister Narendra Modi on Sunday inaugurated Surat Diamond Bourse (SDB), the world’s largest and modern centre for international diamond and jewellery business, at a time when the diamond industry is passing through its worst crisis due to the global economic slowdown and G-7 countries’ tough stand on Russian diamonds.

The SDB building is the world’s largest office complex with over 67 lakh square feet of floor area spread in nine 15-storey interconnected towers with offices ranging from 300 sq. ft to 7,5000 sq. ft. It is aimed at shifting the diamond trading business from Mumbai to Surat, which is the hub of diamond cutting and polishing with thousands of factories across the city.

While opening the new project, Mr. Modi called the building another diamond in the city. “One more diamond has been added to Surat’s magnificence. The tall buildings around the world have lost their sheen in front of such a huge diamond that is now being opened today.”

“Surat diamond industry provides employment to around 8 lakh people, and with the coming up of the new diamond bourse, 1.5 lakh more jobs will be added,” he said. The Prime Minister congratulated the team for the project, and called the project an “emblem of new India and its strength.”

At the SDB, besides offices of trading of cut and polished diamonds and agents dealing with import of rough stones from international markets, 27 retail jewellery outlets will also be opened to complete the value chain of diamond jewellery.



However, the inauguration of the greenfield project, which was launched in 2015, came amidst severe challenges from global slowdown to geopolitical factors that have upended the diamond industry, which provides jobs to nearly one million people in the State.

“The situation is very bad for the workers or artisans in Surat. In last one year, 30 artisans have committed suicide due to financial difficulties,” Bhavesh Tank, vice-president of Surat Diamond Workers’ Union, said.

According to him, the diamond industry has been declining from a global economic slump.

New terminal at airport

Mr. Modi also inaugurated a new integrated terminal building at the Surat airport, which was recently granted international status. The passenger building is capable of handling 35 lakh passengers annually and 1,800 passengers during peak hours. It also has a provision for expansion to be able to handle 55 lakh passengers annually and 3,000 passengers during peak hours.

GUJARAT WILL PERMIT LIQUOR CONSUMPTION IN GIFT TO ATTRACT FINANCIAL INSTITUTIONS

The State government announced on Friday that alcohol would be allowed at hotels, restaurants and clubs offering “wine and dine” in Gujarat International Finance Tec-City (GIFT City) near the State capital, Gandhinagar.

Officials, employees and owners working from GIFT City will be exempt from the prohibition law, which makes alcohol consumption illegal across the State.

Liquor permit

A liquor access permit will be provided to all employees, owners and officials working in GIFT City.

The new rules for GIFT City also allow visitors to consume liquor in hotels, restaurants, clubs that have temporary permits in the presence of permanent employees of a company.

Accordingly, hotels, restaurants and clubs located in GIFT City will be able to obtain wine and dine facility licence there. Employees of GIFT City and visitors can consume liquor in them.

However, these outlets cannot sell liquor bottles, the State government said in a release.

Gujarat has been a dry State since it was carved from Mumbai State and created in 1960.

Prohibition relaxed

However, in the last decade, the State has taken a series of steps to relax prohibition to attract foreign investments.

First, Special Economic Zones (SEZs) set up in the State were allowed exemption from the State’s law pertaining to liquor consumption.

Second, as part of its tourism policy, the Gujarat government has allowed licensed liquor stores in some hotels where only tourists can purchase alcohol from the licensed shops.



According to sources, there are around 60 hotels and clubs that have been given permission for liquor shops to serve tourists.

These licensed liquor stores can also cater to nearly 48,000 local permit holders, who have been issued permits by the State government based on their health requirements.

A health permit for alcohol consumption can be issued based on the recommendation of the State Health Department.

WHY THE UK BANNED AIR FRANCE, LUFTHANSA, AND ETIHAD ADS OVER 'GREENWASHING' CLAIMS

Earlier in December, the United Kingdom's ad regulator banned advertisements from Air France, Lufthansa, and Etihad for allegedly misleading consumers regarding the environmental impact of air travel.

This isn't the first time that airlines have come under fire for false advertising about their sustainability efforts and accused of 'greenwashing'. On Tuesday (December 19), a case filed against Dutch airlines KLM for alleged greenwashing through one of their advertising campaigns went to trial in Amsterdam.

Here is a look at the advertisements, what greenwashing is, and how much the airline industry contributes to greenhouse gas emissions.

The advertisements

In July, Britain's Advertising Standards Authority (ASA) identified three Google ads that suggested the flights operated by Air France, Lufthansa, and Etihad were sustainable.

The Air France ad claimed that the airline was "committed to protecting the environment" and urged holidaymakers to "travel better and sustainably". The Lufthansa ad suggested that its customers would "fly more sustainably" and the Etihad one offered flyers "total peace of mind", mentioning their environmental advocacy.

After carrying out an investigation, the ASA found that none of the aforementioned ads corroborate their environmental claims. They were in violation of the UK ad code, which states such absolute claims need to be "supported by a high level of substantiation".

For instance, about the Etihad ad, the watchdog said: "We understood that air travel produced high levels of both CO₂ and non-CO₂ emissions, which were making a substantial contribution to climate change. We also understood that there were currently no initiatives or commercially viable technologies in operation within the aviation industry that would adequately substantiate absolute green claims".

This is the second time in 2023 that Lufthansa and Etihad have been pulled up by the ASA for breaching UK ad rules, according to a report by The Guardian. At that time, the regulator told the airlines to avoid wording that could imply their activities were good for the environment — while Lufthansa claimed it was "protecting the future", Etihad referred to "sustainable aviation".



What is Greenwashing?

Greenwashing is when firms or governments give a false impression that all of their products or activities are climate-friendly or help in reducing emissions. Moreover, greenwashing may also occur when a company highlights sustainable aspects of a product to overshadow its environmentally damaging activities.

“Performed through the use of environmental imagery, misleading labels, and hiding tradeoffs, greenwashing is a play on the term ‘whitewashing,’ which means using false information to intentionally hide wrongdoing, error, or an unpleasant situation in an attempt to make it seem less bad than it is,” according to a report by Investopedia.

Take for example the infamous 2015 Volkswagen scandal, in which the German car company was found to have been cheating in emissions testing of its supposedly green diesel vehicles. This was a case of greenwashing.

In the Dutch airline KLM’s case, the company ran an advertising campaign telling its customers to “Fly Responsibly”. Environmentalists sued KLM for false advertising, arguing that there is no environmentally friendly way to fly as of now, and accused the airlines of greenwashing.

If you want to read more about greenwashing, [click here](#).

Aviation industry and emissions

Currently, the aviation industry is responsible for approximately 2.5% of all human-produced CO2 emissions, according to the UN Intergovernmental Panel on Climate Change’s (IPCC) 2022 estimates. This may seem like a modest contribution to the overall emissions, but it is set to grow at a very fast pace. The IPCC has said that aviation’s contribution could increase to 5% of the total contribution by 2050 if measures are not taken to address these emissions. The highest predicted value is 15%.

Not only this, it isn’t just CO2 emissions that the aviation industry is releasing. According to the UN Climate Change, if non-CO2 emissions, like water vapour, are also accounted for, the airline industry would be responsible for causing almost 5% of historical global warming.

There is another worry over how aviation emissions are attributed to countries. Emissions from domestic flights are attributed to a country’s emission accounts. However, emissions from international flights are not attributable to any country. They are instead counted as ‘bunker fuels’ and no country has any responsibility to curtail these emissions.



LIFE & SCIENCE

ADDITIONAL ORGANIC MOLECULES FOUND IN ENCELADUS'S PLUME

The Cassini spacecraft first discovered large plumes of material escaping into space from Enceladus's southern hemisphere in 2005. These plumes appear to be coming from a subsurface ocean through fissures in the moon's icy surface. Analyses of data from Cassini's Ion and Neutral Mass Spectrometer (INMS) collected during flybys in 2011 and 2012 determined the presence of water, carbon dioxide, methane, ammonia, and molecular hydrogen in the samples.

Jonah Peter from the California Institute of Technology, Pasadena, California and others re-examined data processed by the INMS instrument team and compared it to a large library of known mass spectra. Using a statistical analysis technique, which analysed billions of potential compositions of the plume material, they identified that the most likely composition of the plumes is the five already identified molecules along with newly identified hydrocarbons hydrogen cyanide (HCN), acetylene (C₂H₂), propylene (C₃H₆), and ethane (C₂H₆), and traces of an alcohol (methanol) and molecular oxygen. "Our results are agnostic to the presence of hydrogen, which requires analysis of additional INMS data," they note.

A finding of the work is the definite presence of nitrogen at Enceladus in the form of HCN. "Previous studies have been unable to resolve the HCN abundance due to confounding signals from fragmentation products at mass 28," they write.

The authors suggest that this compositionally diverse chemical reservoir under the surface of Enceladus may be consistent with a habitable environment and could potentially support microbial communities. "Together with plausible mineralogical catalysts and redox gradients derived from surface radiolysis, these compounds could potentially support extant microbial communities or drive complex organic synthesis leading to the origin of life," the authors write.

The ability of these compounds to support life on Enceladus, however, depends largely on how diluted they may be in the moon's subsurface ocean, the authors note.

ICELAND VOLCANO ERUPTION: WHAT ARE VOLCANOES AND WHY IS THE ISLAND SO VOLCANICALLY ACTIVE?

Lava flows from a volcano in Iceland were slowing down on Wednesday (December 20), although new vents could open at short notice, according to the Icelandic Meteorological Office. The volcano, which is known as Fagradalsfjall and located on the Reykjanes peninsula in southwest Iceland, erupted on Monday (December 18) after weeks of intense earthquakes and tremors.

In the first two hours of the eruption, hundreds of cubic metres of lava per second flowed out of the volcano. The authorities anticipated the eruption due to the seismic activity and evacuated nearly 4,000 people last month from Grindavik, a fishing town threatened by the lava flow. So far, there have been no reports of injury but some houses have been damaged, according to the BBC.

This is the third time that the Fagradalsfjall volcano has erupted in the past two years. It had been dormant for over 6,000 years but became active in March 2021. Notably, Iceland is one of the most volcanically active regions on the planet. It witnesses an eruption every four to five years. However, since 2021 the frequency has spiked to almost one eruption per year.



Here is a look at what volcanoes are, their different types, and why Iceland is so volcanically active.

What are volcanoes?

According to the US Geological Survey: “Volcanoes are openings, or vents where lava, tephra (small rocks), and steam erupt onto the Earth’s surface.”

Volcanoes can be on land and in the ocean. They are formed when material significantly hotter than its surroundings is erupted onto the surface of the Earth. The material could be liquid rock (known as “magma”, when it’s underground and “lava” when it breaks through the surface), ash, and/or gases.

The rise of magma can take place in three different ways, according to NASA. First, when tectonic plates — massive, irregularly shaped slabs of solid rock that carry both continents and oceans and are constantly in motion — move away from each other. “The magma rises up to fill in the space. When this happens underwater volcanoes can form,” it added.

Second, when the plates move towards each other. “When this happens, part of Earth’s crust can be forced deep into its interior. The high heat and pressure cause the crust to melt and rise as magma,” NASA said.

Third is how magma rises at the hotspots — hot areas inside of the Earth, where magma gets heated up. As magma gets warmer, it becomes less dense, leading to its rise.

What are the different kinds of volcanoes?

According to the British Geological Survey, the type of volcano depends on the viscosity of the magma, the amount of gas in the magma, the composition of the magma, and the way the magma reaches the surface.

There are two broad types of volcanoes: a stratovolcano and a shield volcano. Stratovolcanoes have steep sides and are more cone-shaped than shield volcanoes have a low profile and resemble a shield lying on the ground.

There are also a host of different “volcanic features that can form from erupted magma (such as cinder cones or lava domes) as well as processes that shape volcanoes,” the government agency added.

Why is Iceland so volcanically active?

There are two reasons for this. One, Iceland sits on the Mid-Atlantic Ridge (part of the longest mountain range in the world) in the North Atlantic Ocean, where the Eurasian and North American plates are moving apart a few centimetres every year.

The UK’s Meteorological Office said: “This produces volcanic rift zones, regions where the Earth’s crust is being pulled apart and fractured, and here molten rock, or magma, rises up, and some reaches the surface and erupts as lava and/or ash.”

Two, the island sits over a hot zone (or hotspot, as mentioned before), which leads to enhanced volcanic activity in the region.



AN OVERVIEW OF THE EUROPEAN UNION'S ARTIFICIAL INTELLIGENCE ACT

The European Union's Artificial Intelligence (AI) Act is a significant legislative initiative aimed at regulating artificial intelligence technologies within the EU. With the growing influence of AI across various sectors, the EU seeks to strike a balance between fostering innovation and ensuring ethical and responsible AI development. The objectives of the EU AI Act are to create a regulatory framework for AI technologies, mitigate risks associated with AI systems, and establish clear guidelines for developers, users, and regulators. The act aims to ensure the responsible use of AI by protecting fundamental rights and promoting transparency in AI applications.

One of the notable strengths of the EU AI Act is its risk-based approach. The legislation categorises AI applications into different risk levels, ranging from unacceptable to low. This approach enables tailored regulations, with higher-risk applications subject to more stringent requirements. This flexibility acknowledges AI technologies' diverse potential impact on society. It also explicitly prohibits certain AI practices deemed unacceptable, such as social credit scoring systems for government purposes, predictive policing applications, and AI systems that manipulate individuals such as emotional recognition systems at work or in education. This prohibition reflects the EU's commitment to preventing the misuse of AI technologies.

Strengths of the EU AI Act include its risk-based approach, emphasis on transparency and accountability, and the introduction of independent conformity assessments for higher-risk AI applications. However, critics argue that accurately defining and categorizing AI applications may be challenging, leading to uncertainties in regulatory implementation. Concerns also arise about potential hindrances to innovation and competitiveness for European businesses in the global AI market.

The EU AI Act is expected to have a global impact, influencing AI development beyond the EU's borders. It sets ethical standards and may shape global norms for AI development. The act encourages international collaboration in regulating AI technologies and establishes mechanisms for reporting non-compliance. The administrative side involves market surveillance authorities enforcing the act, with specific limits on fines for small and medium-sized enterprises (SMEs) and start-ups.

While the EU AI Act represents a significant step towards responsible AI regulation, its potential drawbacks and global implications underscore the need for a balanced approach between regulation and fostering innovation in the AI industry.

EXPRESS VIEW ON AI SUMMIT IN DELHI: INDIA'S CHALLENGE

Last week's international summit on Artificial Intelligence in Delhi highlighted India's expansive ambition to be a power to reckon with in this new technological domain and a leader in shaping its global governance. The Global Partnership on Artificial Intelligence — an interministerial forum of 28 countries and the European Union — was set up in 2020 to promote cooperation in AI and develop rules for its safe and responsible use. India has been a founding member of this forum.

The Delhi summit comes when the revolution in AI is set to accelerate at a dizzying pace and produce long-term social, political, economic and military consequences for the world. Many nations — from mighty America and China to tiny Singapore and the UAE — are scrambling to intensify their national quests to develop AI and broaden international partnerships. In his



opening remarks at the forum, Prime Minister Narendra Modi recognised the salience of the moment and laid out a broad set of markers for India's national development of AI and outlined a balanced global approach to promoting the beneficial uses of the new technology and limiting its potentially massive harms.

Translating PM's goals into practical outcomes will, however, test the cumbersome ways of India's administrative state that must now deal with a rapidly changing technological landscape in artificial intelligence and respond to the policy imperatives it presents. The NDA government's successful recent push on semiconductor manufacture in India gives hope; but the scale of the effort involved in AI is far more demanding. The Indian enthusiasm for AI at the level of highest political leadership and the popular level will need to be matched quickly to overcome critical weaknesses. One is the lack of massive computing power — "compute" in the AI jargon.

In his address to the forum, PM Modi referred to the planned launch of the national AI mission that aims to strengthen India's compute capabilities. AI systems need large volumes of data to train on. PM Modi hinted that the government agencies could release the large volumes of data in their possession. He will have his hands full, though, in compelling the Indian state to shed its entrenched habit of hoarding data. India must also invest massively in basic sciences, including mathematics, material sciences, computer sciences, linguistics, and neurosciences.

Delhi must also focus on multiplying manifold the number of engineers in AI-related technologies quickly. The demands on the external front, too, are immense. Through 2024, India will preside over the work of GPAI in developing norms for the responsible development and use of AI. This is a deeply contested arena not just between the democracies and autocracies but also within the West and between North and South. That Delhi has not decided on how exactly to proceed in the global governance of AI is reflected in its reluctance to sign several recent declarations on responsible civilian and military uses of AI. If India wants to lead in constructing a new global architecture for AI, it must shed some of its past multilateral baggage and develop an approach rooted in the first principles of national interest and collective global good.

IN BIG AI PUSH, CENTRE TO STEP UP COMPUTE CAPACITY, OFFER FREE SERVICES TO STARTUPS

As part of an Artificial Intelligence Mission to develop its own 'sovereign AI', the Centre is looking to build computational capacity in the country and offer compute-as-a-service to India's startups.

The capacity building will be done both within the government and through a public-private partnership model, highlighting New Delhi's intention to reap dividends of the impending AI boom which it envisions will be a crucial economic driver, a top government official said.

Earlier this month, Prime Minister Narendra Modi announced the AI Mission and said its aim was to establish the computing powers of AI within the country. This, he said, will provide better services to startups and entrepreneurs and also promote AI applications in the sectors of agriculture, healthcare and education.

In total, the country is looking to build a compute capacity of anywhere between 10,000 GPUs (graphic processing units) and 30,000 GPUs under the PPP model, and an additional 1,000-2,000 GPUs through the PSU Centre for Development of Advanced Computing (C-DAC), Minister of State for Electronics and IT Rajeev Chandrasekhar told The Indian Express.



For context, according to a 2020 blog by Microsoft, the company had developed a supercomputer for OpenAI – the firm behind ChatGPT – which consisted of 10,000 GPUs among other things.

A Cabinet approval would be needed to clear the proposal, with the government exploring various incentive structures for private companies to set up computing centres in the country – ranging from a capital expenditure subsidy model which has been employed under the semiconductor scheme, a model where companies can be incentivised depending on their operational expenses, to offering them a “usage” fee, Chandrasekhar said.

“Under the public model, we will look to build compute capacity within the C-DAC under the National Supercomputing Mission. They already have the Rudra and Param systems and we are planning to add 1,000-2,000 GPUs to them,” Chandrasekhar said.

Rudra is an indigenous server platform built by the C-DAC which has two expansion slots for graphic cards. Param Utkarsh is a high performance computing system setup at C-DAC which offers AI over machine learning and deep learning frameworks, compute and storage as a cloud service.

Computing capacity, or compute, is among the most important elements of building a large AI system apart from algorithmic innovation and datasets. It is also one of the most difficult elements to procure for smaller businesses looking to train and build such AI systems.

The government’s idea is to create a digital public infrastructure (DPI) out of the GPU assembly it sets up so that startups can utilise its computational capacity for a fraction of the cost, without needing to invest in GPUs which are often the biggest cost centre of such operations.

Apart from building computing capacities, the government is also working on building datasets and making them available to Indian startups. Last May, the IT Ministry released a draft of the National Data Governance Framework Policy under which it proposed the creation of an India Datasets platform, which will consist of non-personal and anonymised datasets from Central government entities that have collected data from Indian citizens or those in India.

The idea is that the non-personal data housed within this programme would be accessible to startups and Indian researchers, the draft proposal said. Among the stated objectives of the policy is to modernise the government’s data collection, with an aim to improve governance and to enable artificial intelligence (AI) and data-led research and startup ecosystem in the country.

The Indian Express had earlier reported that the Centre is also considering issuing a directive to big tech companies like Facebook, Google and Amazon to share anonymised personal data in their possession with the India Datasets platform.

REVOLUTIONISING INTERFACES: THE JOURNEY OF TOUCHSCREENS FROM CONCEPT TO UBIQUITY

The computing power of the smartphones in our pockets has often drawn comparisons to computing machines of the mid-20th century, which themselves were powerful for their time. Our access to such a powerful technology owes itself to advances in electronics, signalling, and fabrication – but its ultimate ubiquity owes itself to a human-machine interface that has become so intuitive as to make smartphones an extension of our arms: the touchscreen.



What is a touchscreen?

A touchscreen is a surface that combines two functions: to receive inputs for a computer (say, tapping on an app) and to display the output (launching the app). Aside from smartphones, touchscreens are also found today on ATM machines, various household appliances (including TVs and AC panels), e-readers, billing systems, and electronic voting machines.

By many accounts, the touchscreen was invented by an engineer named E.A. Johnson at the Royal Radar Establishment in Malvern, U.K., in 1965. In two papers he published in 1965 and 1967, Johnson set out the specifics of his invention – a capacitive device that could register being touched by a finger. In the 1967 paper, he wrote:

“The idea of the Touch Display was conceived at R.R.E. in an attempt to overcome the limitations in man-machine communications It was originally put forward in the context of an Air Traffic Control Data-processing System for which it has clear application, but it is felt that the arrangement has much wider application...”

The next major invention on this front was the resistive touchscreen in 1970, attributed to G. Samuel Hurst, then at the University of Kentucky. These two inventions, but the latter in particular, gave way to a stream of innovation. For example, in 1982, Nimish Mehta at the University of Toronto developed a touchscreen that could sense two touches at the same time (i.e. multitouch). In 1983, the American artist Myron Krueger reported a way to capture different hand gestures as actions on a screen. Bob Boie at Bell Labs built on Mehta’s work to develop the first transparent (capacitive) multitouch interface in 1984.

While touchscreens also came to be adapted for computer terminals that non-experts could use to interact with the machine from the early 1970s, they started to become commonplace in everyday-use with a portable email-capable device that IBM and BellSouth launched in 1993, called Simon, followed by Apple’s Newton, the Palm Pilot PDA, and other PDAs (short for personal digital assistants). In the early 2000s, engineers lead the way with wall-sized touchscreens that multiple people could interact with, even remotely; devices that could render ‘normal’ computers capable of sensing touch and gestures; early touchpads that used multitouch to bring finger movements into the virtual realm; plus various improvements to the way touchscreens worked.

Vis-à-vis consumer electronics, there were two big breakthroughs in 2007: the release of the LG Prada and the Apple iPhone, which were the first phones with touchscreens.

How do touchscreens work?

The two most common types of touchscreens are capacitive and resistive; there are other techniques as well. Of these, capacitive touchscreens are used in smartphones and other portable ‘information appliances’.

Such a touchscreen consists of a surface with a grid of capacitors.

A capacitor is an electronic device that consists of two plates parallel to each other, with an air gap in between, and each plate connected to the circuit. The plates store electric charge.

When a finger touches the surface, an imperceptible amount of charge from a capacitor nearby flows through the wires into the finger, distorting the electric field at that point. Sensors located at the edges of the screen locate this distortion and relay it to a signal-processor to determine



where the finger has touched. (This is why some touchscreens can't sense touch if the user is wearing gloves.)

A more involved scheme called the projected capacitive method is used in smartphones with the mutual capacitance architecture. Here, there are two conducting layers. Each layer consists of strips of conducting material: in one, the strips run left to right, and in the other from top to bottom. When two strips cross over each other, they form a capacitor, and the changes in its capacitance are used to measure where a finger has touched the screen. This scheme is amenable to detecting multiple simultaneous touches.

Instead of capacitors, a resistive touchscreen uses resistance. That is, there are two sheets, both conductors, separated by a small gap.

When a finger touches one sheet, it moves it at that point to touch the underlying sheet, allowing a current to pass there. Again, sensors pick up on this distortion from a grid of wires attached to one of the two sheets and, using a processor, determine the point of touch. Other touchscreen technologies are based on optical inputs and acoustic waves, among others.

Between 2007 and 2013, capacitive touchscreens overtook resistive touchscreens in the consumer electronics market.

Resistive touchscreens are cheaper to make and require less power to operate. But according to a review published in the journal *Sensors* in July 2021, capacitive touchscreens have better image clarity, sensitivity, and durability.

What next for touchscreens?

While touchscreen technology has advanced rapidly, innovation continues to this day, given the advent of smartwatches and their small screens; machine-learning approaches that can extract more and more information from noisy inputs; and the integration of more and more sensors into smartphones themselves.

Ultimately, what E.A. Johnson wanted was a way to ease "man-machine interactions", not a way to have haptic interactions with machines per se. In this sense, the machines around us virtually have a long way to go until, like in the Iron Man films, they're extensions of ourselves.

GOOGLE MAPS IS CHANGING TO OFFER INDIAN USERS THE VISUAL EXPERIENCES THEY DEMAND... HERE'S HOW

"Expectations of users are changing... global youth have different expectations... they actually want things to be more visual, more immersive. That's what is engaging for them. We are recognising this pattern all over the world." Miriam Karthika Daniel, Vice President – Maps Experiences, Google sums up how Google Maps is changing with the times compared to when a simple map would do.

"In places like India, voice and visual experiences are actually valuable. India is the number one country where people search using voice. It's much easier for people to use their local vernacular language to search. So we want to support more and more of these visual and immersive use cases," she told indianexpress.com in an interview, adding how the deployment of Street View, now in over 3,000 Indian cities, is actually making it possible for Google to bring some of these visual and immersive use cases to the country.



While Google is using AI and imagery from local partners, Genesys International and Tech Mahindra, to enable Streetview, it is also launching Lens in Maps across 15 Indian cities by January 2024 letting users get more information about businesses on Android phones by simply pointing the camera down a street. Similarly, Live View Walking Navigation will give users arrows, directions, and distance markers overlaid on the Maps screen in over 3,000 cities for Android users.

For Google, which has been using AI maps “for nearly a decade”, the technology has allowed to “map millions of kilometers of urban and rural roads and more than 300 million buildings”. This is serving millions of users on a daily basis, on average surfacing over 50 million searches across multiple languages, and powering over 2.5 billion kms of directions every single day on Google Maps in India, a Google Maps blog post elaborated. With the help of AI, Google has now put over 30 million businesses and places on its maps, enabling over 900 million connections a month between consumers and businesses.

“Our AI technology has made commute decisions more seamless, helping people choose the most time-efficient route with traffic predictions,” the blog post said, citing the example of Project Greenlight which analyses traffic patterns to support cities in optimising the traffic flow at intersections.

“ETAs have slightly more error bars in India because there’s a mix of vehicle modes and traffic congestion is high. So we constantly have models that are looking at trips and trip outcomes. What did we predict at the beginning of the trip and what was the outcome at the end of the trip,” Daniel explained, adding that it is “continuously self learning and updating itself”.

Daniel said if Google can learn and solve some of the problems adequately in India, they can also take it to many parts of Africa and Latin America where there are similar patterns in traffic. “We have teams in India that are solving these problems almost on a real-time basis. And then we are doing that here because this is probably hitting the highest complexity for now,” she explained.

Catering to specific Indian needs, Google Maps will now have places of worship, medical facilities and government services in the country. It is also using these to launch an India-first innovation in the form of address descriptors that help local users understand addresses better like they do in real life. So when a user drops a pin and shares with someone, Google Maps will automatically find up to five of the most relevant landmarks and area names around their pinned address for reference helping users navigate into unfamiliar areas. This feature will launch in 75 cities early next year.

Daniel explained that Google Maps is also bringing in the AI-driven fuel-efficient routing feature to India in January. “From its launch in other countries, from October 2021 through September 2023 it’s already estimated to have helped prevent more than 2.4 million metric tons of CO₂e emissions globally — the equivalent of taking approximately 5,00,000 fuel-based cars off the road for a year,” the blog post said. She said they are also working with ONDC and Namma Yatri mobility app to bringing metro schedules and bookings to users in Kochi, followed by other cities.

A STORY OF A CONVOCATION, AN IRON PRESS, MY KURTA, AND ITS POLYMERS

The iron press is a wonderful machine. There are two important ingredients to this wonder: it has a heavy metal base (often some alloy of iron, thus the name) and that it heats up. Now, have you ever wondered why our clothes are straightened when ironed?



Our clothes are made of some plant or animal fibres, like cotton, wool, etc. Fibres are long chain-molecules often made of carbon, oxygen, and hydrogen – very similar to the glucose and sugar that we eat (this doesn't mean cotton is edible, however tempting your clothes may seem).

These molecules can be really, really long. If the water molecule, which is made of two hydrogen atoms and an oxygen atom, is the size of a pencil, a typical cellulose fibre, one of the primary molecules of cotton, would be about 100 metres long! These kinds of molecules are called polymers. Polymers make up many things around us, including plastic, soap, and even tomato ketchup. There are synthetic polymers (made in a lab, like plastic) and then naturally occurring ones, such as cotton.

When you wash your clothes, these molecules become knotted around each other – like noodles when you cook a packet, or your hair if you still have the privilege of having long hair (unlike most faculty members and a few students here). This is often because of the water molecules that become stuck between and around these molecules.

When you iron your cloth, what you are really trying to do is rearrange these long molecules into neat, straight patterns. In the process, some of these water molecules escape and evaporate. You will at times notice a damp feeling when you are ironing a cloth. Now you know why.

Polymer physics

This said, if you just place a heavy weight on cloth and try straightening it, it will not work. Why is heat required to achieve this ironing effect?

Heat is nothing but energy: it causes all the atoms and molecules to vibrate a bit and that does the trick. As we know, each of these cellulose molecules is very long – and they can have various twists and turns along their length, like one strand in a noodle.

Once in a particular shape, all the atoms and electrons inside them arrange themselves in a way that they can have as low energy as possible. But there can be another way of arranging similar twists and turns in the same system like another noodle in your pan with a slightly different energy or even lower than the previous way.

However, once stuck in a particular pattern, it is very difficult for all the atoms to move together. They have very little energy to do so as well as little wiggle room. The system is basically in some intertwined state, similar to cold noodles or wet hair. You may have experienced this difficulty when you tried to move a fork inside the noodles or to move a comb through tangled hair.

When you provide heat, these molecules get some energy such that the molecular bonds vibrate and change their shape. In the process, some of the water evaporates out. This is again similar to what you do when you want to fill up some food grain in a container and there is not enough space.

You shake the box a little bit so that the grains move around, settle down, and you find some more free space.

Similarly, here, you provide some heat (or microscopic 'shaking') to cause the molecules to make some rapid twist and turns. It is at this moment that you apply pressure with the heavy metal, removing the twists and turns and straightening the fibre up. Since the molecular twists and turns are somewhat flexible when heated, they will do as you want. As soon as you take the iron away, the molecules once again cool down and get stuck in the straight pattern you had left them in, leaving your cloth wrinkle-free!



Statistical Physics

Of course, the heat has to be such that they only move the atoms around, not so much that they break the molecular bonds. Otherwise this is how you may end up with a burnt hole in your dress.

In fact, different polymers have different temperatures at which they shake up the best, so different temperatures at which they can be most efficiently straightened. This is why there is a temperature dial on the iron. You will notice different cloth types marking how hot the iron should get, depending on the polymer you are ironing. This is because the polymers have different chemical compositions.

For example, everyday plastic melts quite easily – which is why people avoid putting hot food in a polythene container. Well, that night my ironing did work and luckily I woke up in time to attend the programme.

HOW THE HOTTEST SUMMER EVER AFFECTED THE ARCTIC: 5 THINGS YOU NEED TO KNOW

The 2023 summer was the warmest on record in the Arctic, which, due to climate change, has warmed nearly four times faster than the globe since 1979. Overall, the past year was the sixth-warmest year the Arctic had experienced since reliable record-keeping began in 1900.

These were some key findings of the National Oceanic and Atmospheric Administration’s (NOAA) annual Arctic Report Card, released on Wednesday (December 13). The peer-reviewed analysis was done by 82 scientists from 13 countries.

The rising temperatures in the northern polar region contributed to unprecedented wildfires that forced communities to evacuate, a decline in sea ice extent, devastating floods, food insecurity, and a rise in sea level, according to the study.

“These changes that are happening, they’re more than the graphs and the figures that we see,” Susan Natali, a senior scientist at the Woodwell Climate Research Center who was not involved in the NOAA report, told The New York Times. “They’re having a very severe impact on people’s health and ability to travel and ability to access subsistence resources and Indigenous ways of living.”

Here is a look at the most severe consequences of the soaring temperatures in the Arctic.

1. THAWING OF SUBSEA PERMAFROST

Subsea permafrost is essentially frozen soil beneath the seabed that contains organic matter. While it has been gradually thawing for thousands of years, (now) warmer ocean temperatures are accelerating this process, making it a cause of concern for scientists.

“Just as with permafrost on land, when subsea permafrost thaws, the organic matter it contains decays and releases methane and carbon dioxide – greenhouse gases that contribute to global warming and worsen ocean acidification,” three of the authors involved in the NOAA study wrote in an article published by The Conversation.

To make matters worse, there isn’t enough research to estimate how much greenhouse gases will subsea permafrost release in the following years and what will be its effect on global warming.

2. FOOD INSECURITY



Due to the impact of climate change on freshwater bodies and marine ecosystems, Western Alaska recorded another year of extremely low numbers of Chinook and chum salmon — 81% and 92% below the 30-year mean, respectively. The size of adult salmon has also decreased, according to the report.

It led to “fishery closures, worsened user conflicts, and had profound cultural and food security impacts in Indigenous communities that have been tied to salmon for millennia,” it added.

Interestingly, while the population of Chinook and chum salmon declined, sockeye salmon increased in number — 98% above the 30-year mean — in Western Alaska.

Rick Thoman, lead editor for this year’s report card and a climate specialist at the University of Alaska, said: “The diverging impacts are affecting Indigenous communities that depend on the salmon for food, and challenging fishery managers as the different species respond in unique ways to the warming climate.”

3. RAGING WILDFIRES

Canada — 40% of its land mass is considered Arctic and Northern — was among the worst affected regions when it comes to wildfires. The country witnessed its worst wildfire season on record with fires burning more than 10 million acres in the Northwest Territories, according to the NYT. This happened as high temperatures dried up vegetation and soil, coupled with below-average rainfall, creating perfect conditions for wildfires to burn more easily.

“More than two-thirds of the territories’ population of 46,000 people had to be evacuated at various points and smoke from the fires reached millions more people, reducing air quality as far as the southern United States,” the news outlet added.

4. SEVERE FLOODING

Rising temperatures have led to dramatic thinning of the Mendenhall Glacier, located in Alaska, over the past 20 years, the NOAA report said. As a result, over the years, the meltaway water has annually caused floods in the region. One such disaster took place in August 2023, when “a glacial lake on a tributary of the Mendenhall Glacier burst through its ice dam and caused unprecedented flooding and severe property damage” in Alaska’s Juneau, the study added.

5. GREENLAND ICE SHEET MELTING

The NOAA report noted that the highest point on Greenland’s ice sheet experienced melting for only the fifth time in the 34-year record. Not only this, the ice sheet continued to lose mass despite above-average winter snow accumulation — between August 2022 and September 2023, it lost roughly 350 trillion pounds of mass. Notably, Greenland’s ice sheet melting is the second-largest contributor to sea-level rise.

OUTCOMES OF THE COP-28 CLIMATE SUMMIT

The story so far:

The 28th session of the Conference of the Parties (COP) — an annual convening of countries signatory to the United Nations Framework Convention on Climate Change (UNFCCC) — happened in Dubai this year, with high expectations that countries would take concrete steps to address the climate crisis. The negotiations encompassed mitigation efforts, adaptation strategies,

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



financing mechanisms, and the role of developed countries versus developing nations in climate action. The summit ended with progress on certain fronts but lingering challenges on others.

What happened with respect to the loss and damage fund?

Following the agreement reached at COP-27 to create a 'Loss and Damage' (L&D) fund, the last year was dedicated to negotiations on fund-management and financing. In a historic decision, the fund was operationalised at COP-28.

However, only a meagre \$790 million has been pledged so far, by a few nations, despite the corpus requiring \$100 billion to more than \$400 billion a year. Notably, the U.S., the largest historical emitter, committed only \$17.5 million. Moreover, the World Bank was designated to oversee and administer the fund. But concerns originating from the experiences of developing countries with the World Bank related to questions about legal autonomy, flexibility, and decision-making authority, and general scepticism about the fund's agility in responding promptly to emergencies, have emerged. There is also a prevailing sentiment among countries that the communities affected by climate-related disasters should be able to directly access funding, preferably in the form of grants and not loans.

What about the global stocktake?

This year's COP summit saw the first global stocktake (GST). According to the UNFCCC, the GST "enables countries and other stakeholders to see where they are collectively making progress towards meeting the goals of the Paris Agreement — and where they are not".

The decision of countries' at COP-28 to transition away from fossil fuels was coupled with the ambition to triple renewable energy capacity by 2030. More than 20 countries also pledged to triple their nuclear energy capacity. However, the transition from fossil fuels is restricted to energy systems alone; they can continue to be used in the plastics, transport, and agriculture sectors. The declaration also refers to 'transitional fuels', such as natural gas, for ensuring energy security. But this falls short of true climate justice as it allows industries to continue operating in the business-as-usual mode.

Further, while the declaration called for accelerated climate mitigation, it alluded to unproven and risky technologies such as carbon capture and storage (CCS) and carbon removal. The former enables users of fossil fuels to prevent their emissions from entering the atmosphere by capturing the emissions at the source and storing them permanently underground.

What about green finance?

The financial segment of the GST implementation framework explicitly recognises the responsibility of developed nations to take the lead in climate finance. There is also a reference to the private sector's role in addressing financial shortfalls and an imperative to supplement grant-oriented, concessional finance to enable equitable transition in developing countries. Nevertheless, specific information regarding the entities obligated to furnish this grant-based finance is lacking.

The COP-28 also witnessed the establishment of innovative global green-finance mechanisms to support developing nations in their transition to sustainable practices. The Green Climate Fund received fresh support of \$3.5 billion, allowing it to finance adaptation and mitigation projects in vulnerable regions. An additional \$188 million was pledged to the Adaptation Fund. New partnerships between public and private sectors were forged to mobilise investments in



renewable energy, sustainable agriculture, and infrastructure. The COP-28 Presidency also introduced ALTÉRRRA, an investment initiative with an ambitious goal to globally mobilise an unprecedented sum of \$250 billion by 2030.

Despite these efforts, the available funds fall well short of the \$194-366 billion annual funding requirement for adaptation, as estimated by the United Nations.

How did India fare at COP-28?

The UAE declaration on climate and health came into being at COP-28 through a partnership of the COP-28 Presidency with the World Health Organization. It recognises the growing health impacts of climate change and acknowledges the benefits of climate action, including a reduction in air pollution and lowering the cost of healthcare. The declaration, signed by 123 countries, has collectively committed \$1 billion to address the growing climate-health crisis. However, India didn't sign this declaration because reducing greenhouse gas (GHG) emissions in the health sector would mean reduction in emissions from gases used for cooling. As India's healthcare infrastructure is still growing, such a commitment could compromise the healthcare requirements of a growing population, particularly rural.

The Global Methane Pledge launched at COP-26 received renewed attention at COP-28, with the Climate and Clean Air Coalition becoming the new secretariat and partners of the pledge announcing more than \$1 billion in new grants for funding projects to reduce methane emissions from the agriculture, waste, and gas sectors. More than 150 countries signed the pledge to reduce methane pollution. India isn't a signatory to this pledge because it shifts focus from carbon dioxide to methane, a GHG with a lower lifetime.

Also, methane emissions in India are primarily from rice cultivation and enteric fermentation (livestock rearing), which support the livelihoods of small and marginal farmers.

What are the takeaways?

The COP-28 outcomes had a lot of firsts, such as the declaration on climate and health, acknowledgement of the role of nature-based solutions for biodiversity conservation and climate, and the need to transition away from fossil fuels. Some 134 countries also agreed to a landmark declaration to transition to sustainable and resilient food systems.

However, some challenges and differences between developed and developing countries remain to be addressed. One key issue of contention was fossil-fuel subsidies. While developed countries advocated for phasing them out, developing countries, including India, refused a phase-out over implications on economic growth and development.

Such a phase-out also has social implications: several communities rely on fossil fuels (coal, in India's case) for gainful employment. Moreover, emphasising the principle of common and differentiated responsibilities and the historical responsibility of developed countries for GHG emissions, developing countries argued for increasing the flow of climate finance and technologies to facilitate just job transitions and inclusive development.

Some other contentious issues spanned market mechanisms, financial resource allocation, the role of the World Bank as the agency for managing the L&D fund, and private sector engagement in climate action.



In sum, COP-28 is a mixed bag of outcomes. The commitment to ramp up renewable energy targets is a significant step forward — whereas issues on L&D metrics, fund management and disbursement, market mechanisms, risky technologies, the room left for continued use of fossil fuels in many sectors, and natural gas as a transitional fuel leave much to be desired.

IS THE WORLD CLOSER TO PHASING OUT FOSSIL FUEL?

The story so far:

The 28th edition of the Conference of Parties (COP) concluded in Dubai this week with 198 signatory countries agreeing that the world must “transition” away from fossil fuels in a “just, orderly and equitable manner” to achieve net zero by 2050.

Does the wording of the agreement suggest that the end of fossil fuels is near?

Far from it. The Dubai Consensus, as this agreement is called, is significant only because this is the first time since 1995, when the first ever COP was held in Berlin, that there is a formal acknowledgement that emissions from fossil fuels are the main culprit driving global warming. So far, all agreements have only spoken of the need to stem “greenhouse gas emissions.” This is despite it being common knowledge that three-fourth of such emissions and 90% of carbon dioxide are the result of burning coal, oil and gas. It was only in the 26th edition of the COP, in Glasgow in 2021, that countries agreed to tackle coal — the fossil fuel with the biggest global-warming footprint — by agreeing to “phase down” its use. It’s important to keep in mind here that “phase down” and “phase out” have no meaning on their own because they do not refer to any specific year by which the use of these fuels must terminate. Large, developing countries like India and China, have protested against the singling out of coal among fossil fuels, on the grounds that they need them for lifting their masses out of poverty and providing energy security. India, while rich in coal reserves, is still an importer of the product and has limited oil and gas reserves. China is rich in both coal and gas. The United States, that derives about a fifth of its energy from coal, has usually been supportive of calls to phase out coal but being heavily dependent on oil and gas reserves, has never voiced any call to action to eliminate the latter two. However, now that all fossil fuels have been included in the Dubai Consensus, it brings parity among fuels and acknowledgement that they all need to be done away with for the world to have a chance at preventing global, average temperatures from rising 1.5 degree Celsius over pre-industrial levels. But because there are no timelines yet, fossil fuels are going to be the mainstay of economies everywhere in the years to come.

Can fossil fuels be immediately replaced?

Nearly two centuries of industrialisation has meant that there is a well-oiled infrastructure system to extract, process and distribute coal, oil and gas to all kinds of power plants and convert them to electricity and combustible products, ranging from petrol and diesel to plastic. Then there is the infrastructure — transmission grids and pipelines — to channel these stores of energy to houses and vehicles. Unfortunately, power from natural sources of power such as solar and wind are not as easily available, on demand, as fossil fuel: the sun because of its unavailability at night and wind due to the temperamental nature of the ocean and atmosphere. The infrastructure to store all of the energy produced this way is grossly inadequate. India’s National Electricity Plan, 2022-27, plans to add nearly 87,000 MW in this period in the form of fresh coal-fired capacity: 27,000 MW via under-construction power plants and 60,000 MW from new plants.



Oil production in the U.S. hit record levels this year. Since 2010, the number of oil barrels per day has tripled and gas production has risen two and half times in the country. At COP deliberations this year, one of the trickiest conundrums was the large presence of oil and gas manufacturers and of course, the hosting of a climate summit in a petro-state. The Dubai Consensus agreement stating that a transition from fossil fuel, while necessary, suggests that “transition fuels” could play a role in “facilitating the energy transition while ensuring energy security.” Though there is no definition of what these fuels are, natural gas has been touted as one of the contenders. Even though natural gas production leads to methane emissions, estimates by the International Energy Agency proffer that in balance, switching from coal-to-gas reduces emissions by 50% when producing electricity and by 33% when providing heat. This of course invites criticism that such a framing of natural gas advantages countries which have natural production and distribution capabilities for this gas.

What does the Dubai Consensus say about methane?

Methane is a potent greenhouse gas and has several times more heat-trapping capabilities compared to carbon dioxide. It is a key component of natural gas and responsible for about a third of planetary warming just behind carbon dioxide. “Accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030,” is necessary for humanity to have a shot at keeping average temperatures from rising beyond 1.5 degree Celsius by the end of the century, the agreement notes. The Global Methane Pledge to cut methane emissions 30% of 2020 levels by 2030 was signed on by nearly 150 countries at the COP-27 summit in Egypt, last year. China and the U.S. have also agreed to address industrial methane emissions, that result from natural gas production.

India has resisted pressure to cut methane emissions on the grounds that most of its methane results from the agricultural sector. However, it has unveiled plans to make its energy production processes more efficient to reduce its release.

THE LIMITATIONS OF CCS AND CDR AND THEIR GRIP ON FUTURE CLIMATE

At the COP28 climate talks underway in Dubai, draft decisions thus far have referred to the abatement and removal of carbon emissions using carbon capture and storage (CCS) and carbon-dioxide removal (CDR) technologies. Considering the meaning of the word ‘abatement’ has become an important bone of contention, understanding the meaning and limitations of CCS is important – as also those of CDR.

What are CCS and CDR?

CCS refers to technologies that can capture carbon dioxide (CO₂) at a source of emissions before it is released into the atmosphere. These sources include the fossil fuel industry (where coal, oil and gas are combusted to generate power) and industrial processes like steel and cement production.

CDR takes the forms of both natural means like afforestation or reforestation and technologies like direct air capture, where machines mimic trees by absorbing CO₂ from their surroundings and storing it underground.

There are also more complex CDR technologies like enhanced rock weathering, where rocks are broken down chemically; the resulting rock particles can remove CO₂ from the atmosphere. Other



technologies like bioenergy with carbon capture and storage (BECCS) capture and store CO₂ from burning biomass, like wood.

At COP28, the term “unabated fossil fuels” has come to mean the combustion of these fuels without using CCS technologies to capture their emissions. Draft decision texts point to a need to “phase out” such unabated fossil fuels. On the other hand, removal technologies have been referenced in the context of the need to scale zero and low-emission technologies and support forest restoration as a means to promote emission removals.

How much CCS and CDR?

While their technical details are clear, scientists have questions about the scale at which CCS and CDR are expected to succeed.

The Sixth Assessment Report (AR6), prepared by the United Nations Intergovernmental Panel on Climate Change (IPCC), deals with climate mitigation. It relies a lot on the use of CDR for its projections related to the world achieving the goal of limiting the world’s average surface temperature increase to 1.5 degrees C with no or limited overshoot. (Overshoot means the temperature limit is temporarily exceeded.)

The emission scenarios that the IPCC has assessed that have more than a 50% chance of limiting warming to 1.5 degrees C (with no or limited overshoot) assume the world can sequester 5 billion tonnes of CO₂ by 2040. This is more than India emits currently every year.

There is no pathway to 1.5 degrees C in AR6 that doesn’t use CDR.

“Without CDR, we would have to decrease emissions by more than during the COVID-19 pandemic annually,” David Ho, a climate scientist at the University of Hawaii, told this reporter.

“If CO₂ emissions continue at current levels, we will have a 50% chance of exceeding 1.5 degrees C compared to pre-industrial levels in seven years,” Dr. Ho added. “To achieve the decrease in CO₂ emissions we need by direct mitigation would be nearly impossible at this point, and would require a lot of CDR,” Dr. Ho explained.

Direct mitigation refers to reducing our reliance on fossil fuels with renewable energy sources like solar and wind power.

How well does CCS work?

The IPCC AR6 report states CDR ought to be used “to counterbalance hard-to-abate residual emissions.” The reason: “available CDR is to be used strategically to compensate hard to abate residual emissions, not to maintain a high level of fossil fuel use,” Alaa Al Khourdajie, a research fellow at Imperial College London and a contributing author to AR6, said.

For CCS, too, Dr. Al Khourdajie and other AR6 authors showed in a recent paper that the term “abated fossil fuels” should be used only in the context of highly effective CCS applications, with a capture rate of 90-95% or more, the captured emissions being stored permanently, and methane emissions leakage from upstream oil and gas production processes being kept under 0.5% (approaching 0.2%).

But in the real world, natural CDR has been tacked on to existing emissions. For example, the 2023 ‘Land Gap’ report estimated that various governments have proposed to remove CO₂ using around



one billion hectares of land. Based on this, the report reflected: “Some pledges over-rely on land-based CDR to offset fossil fuel emissions. This raises serious concerns that these countries are shifting their mitigation burden away from reducing fossil fuel use.”

As for CCS developments, Henri Waisman, who leads a global initiative called ‘Deep Decarbonization Pathways’ and coauthored an IPCC Special Report, said, “CCS is still a technology under development without demonstrated feasibility at large scale despite decades of development.”

Aside from high cost, he pointed to creation of additional energy needs, and challenges in the transport and long-term storage of carbon.

How well does CDR work?

CDR methods like afforestation, reforestation, BECCS, and direct air capture are constrained by their need for land.

Land also invokes equity concerns. Land in the Global South is often considered to be ‘viable’ and/or ‘cost-effective’ for planting trees and deploying other large-scale CDR methods. As a result, such CDR projects can adversely affect land rights of indigenous communities and biodiversity and compete with other forms of land-use, like agriculture that is crucial for ensuring food security.

This is of particular concern vis-à-vis technological CDR at scale. “For example, what’s to prevent companies from using land in the global south for direct air capture and using land that would otherwise be used to generate renewable energy to power the economies of global south countries?” Dr. Ho asked.

He added that “the next decade will be pivotal in determining if there are viable and scalable CDR methods. But we also need to figure out who will pay for CDR at scale in the future. “Imagine global north countries asking ‘why should we spend trillions of dollars on CDR when we can spend it on adaptation?’”

Pitfalls of CCS and CDR

By removing CO₂ from their environs, there are concerns that CCS and CDR create more ‘room’ to emit the greenhouse gas. (In some cases, CCS has also been used to inject captured CO₂ into oil fields to extract more oil.)

In future emissions scenarios that the IPCC has assessed, the world’s use of coal, oil, and gas in 2050 needs to decline by about 95%, 60%, and 45% respectively (all median values) from their use in 2019 to keep the planet from warming by less than 1.5 degrees C with no or limited overshoot. But without CCS, the expected reductions are 100%, 60%, and 70% for coal, oil, and gas by 2050.

In a recent paper, an international group of researchers wrote that higher use of CCS and CDR make way for emissions pathways with a higher contribution from gas.

GLOBAL COAL DEMAND LIKELY TO DECLINE 2.3% BY 2026: IEA

Despite production of coal reaching a record this year, global demand is expected to decline by 2026, a report by the International Energy Agency (IEA) says. While the decline is expected to be



due to a shift towards renewable energy and plateauing demand in China, India will remain the “driving force” for the fuel until that year.

The report, released on December 15, sees the global demand for coal rising by 1.4% in 2023, surpassing 8.5 billion tonnes for the first time. This increase, however, masks stark differences among regions. While demand in the European Union and United States is expected to drop by 20% each, it is expected to rise by 8% in India and 5% in China in 2023 due to demand for electricity and diminished generation of hydroelectric power.

The IEA’s expectations of a decline in coal demand is premised also on a change in global climate. The current El Nino conditions, usually linked with a drier monsoon in Asia, are expected to turn to La Nina, which is generally linked to better rainfall, between 2024 and 2026. This will presumably translate to greater hydroelectric power output.

Moreover, a steep upward trend in low-cost solar photovoltaic deployment is expected to aid renewable power generation.

“Further to that, nuclear generation is set to see moderate increases, especially in China, India, and the European Union. Against this background, coal-fired generation is likely to be pushed into a downward trajectory from 2024,” the report says.

Currently, a little over half the world’s coal demand comes from China. With a major expansion of renewable energy expected, coal demand in the country is expected to fall in 2024 and plateau in 2026. Overall, this will result in a 2.3% fall in global coal demand by 2026.

Global demand to remain well

Coal, the most important energy source for electricity generation, steel-making, and cement production, is also the largest source of carbon dioxide (CO₂) emissions from human activity. Despite forecasts of a fall, global consumption is expected to remain well over 8 billion tonnes through 2026, the market report says.

“We have seen declines in global coal demand a few times, but they were brief and caused by extraordinary events such as the collapse of the Soviet Union or the COVID-19 crisis, Keisuke Sadamori, IEA Director of Energy Markets and Security, said in a statement.

“This time appears different, as the decline is more structural, driven by the formidable and sustained expansion of clean energy technologies,” he added

Turning point

“A turning point for coal is clearly on the horizon — though the pace at which renewables expand in key Asian economies will dictate what happens next, and much greater efforts are needed to meet international climate targets.”

Reducing use of ‘unabated’ coal, or coal-burning without technologies to capture carbon, is among the explicit agreements of countries signatory to the United Nations Framework Convention on Climate Change, the world’s biggest influencer of climate policy.

To have a chance at keeping temperatures from rising beyond 1.5 degrees Celsius by the end of the century, coal emissions must decline nearly 95% between 2020 and 2050.



China, India, and Indonesia — the three largest coal producers globally — are expected to break output records in 2023, pushing global production to a new high in 2023. These three countries now account for more than 70% of the world's coal production.

WHAT DOES COP-28 MEAN FOR CITIES?

The story so far:

The 28th Conference of Parties (COP-28) in Dubai has been described by some as being a mixed bag. Even though it could not come up with a profound statement of ending fossil fuels, at least a discussion was triggered. A few ambitious delegates described it as the “beginning of the end of an era of fossil fuels”. This was an important COP owing to the Global Stock Taking (GST) over the Paris climate deals of keeping global temperatures below 1.5 degree Celsius and reducing greenhouse gas (GHG) emissions. Likewise, the Loss and Damage Fund was also cleared. The focus was therefore, on both mitigation and adaptation strategies.

What was discussed about cities?

When the United Nations Framework Convention on Climate Change (UNFCCC) initiated the COP in 1995, 44% of people lived in cities. Currently, 55% of the global population is urban and this is expected to reach 68% by 2050. The urban world today consumes nearly 75% of primary energy and is responsible for roughly 70% of CO₂ (76% of total GHG) emissions. Hence, the desired results of the Paris commitments are not possible without addressing urban issues.

At this year's COP, there was a special day dedicated to a ministerial meeting on urbanisation and climate change. This meeting convened Ministers of housing, urban development, environment finance, and other portfolios; local and regional leaders, financial institutions, non-government organisations; and other stakeholders. Such moves forced some of the city representatives and Civil Society Organisations (CSOs), to raise their voice and emphasise on the principle — “nothing for us without us”. This lays down the fundamental point of redefining the financial and governance architecture of COPs. City representatives have been arguing for multi-level green deal governance and for revising the governance and regulation of energy and climate action. Likewise, some European city groups have been staunchly advocating for direct actions in cities.

Rafal Trzaskowski, ENVE chair and Mayor of Warsaw, leading member of the mayor's delegation for COP-28, argued for formally recognising the role of subnational governments in global climate change negotiations, accelerating and scaling up climate action by working across all levels of governance and sectors, and providing direct financing and technical assistance to cities and regions. This will require an ‘out of the box’ imagination as it would mean transgressing the authorities of federal governments. Nevertheless, the moot point is that cities and regions are key actors in driving climate ambition forward and in creating green jobs, reducing air pollution, and improving human health and well-being. The efforts of city governments should be formally recognised in COP decision documents.

What can be done in the Global South?

The cities of the Global South are far more vulnerable than their western counterparts. The city leaders are hardly empowered, the major employment is in the informal sector, adaptation is key as most cities are vulnerable to climate induced disasters and the pent up drive to attract investments to cities has further widened the gap between the rich and the poor. In most countries, and in India particularly, 40% of the urban population live in slums. Pollution is a major



contributor in reducing life expectancies and social and economic inequities are quite inherent in their systems. So, to ensure fair participation in climate action plans and to claim loss and damage compensation, etc., there has to be a radical shift in the processes governing the cities. One of the ways of achieving progress, even if that is too little, can be through creating a climate atlas of these cities, mapping them and identifying hotspots. Here, a major support system from existing financial architecture including the outcome of COPs is required.

During the preparation of Nationally Determined Contributions (NDCs) and National Adaptation Plans, cities find themselves excluded from the process of climate action plans. There is hardly any representation of city leaders and civil society groups in this process. Hence, reclaiming space at COPs and during the run up to them in respective countries should happen parallelly.

This does not discount the fact that some cities like Chennai are spearheading their climate action plan and have decided to meet their zero emission targets by 2050, even before the Indian national government's stipulated time period of 2070. Though this may sound too ambitious, it qualifies the point that cities are at the forefront in reclaiming spaces in meeting climate action plans and hence should get a fair share in planning both mitigation and adaptive strategies. COP-28 may have been a damp squib as many say, however, it has brought to fore the crucial question of acknowledging the interconnections, interdependencies and interconnectedness of climate action, social justice and the role of the urban world.

AFGHANISTAN, LEFT OUT OF COP-28, HOPES FOR INCLUSION IN COP-29

Afghanistan is one of the countries most vulnerable to climate change, but the country was absent from the COP-28 climate summit in Dubai. It has been left out of U.N. talks since the Taliban took over Kabul in 2021.

No foreign government has formally recognised Taliban leadership and it doesn't have a seat at the U.N. General Assembly.

Foreign officials have cited the Taliban's restrictions on women as the reason for current isolationist policies, particularly its barring of girls and women from high school and universities.

However, some have questioned the country's continued exclusion. Humanitarian and international officials have said they made efforts this year to allow Afghan representatives to be able to attend, coinciding with broader talks among foreign governments and multilateral institutions on how to deal with the Taliban.

Though ultimately unsuccessful, "there's hope that maybe next year you might see engagement with Afghanistan in some capacity again," said Qiyamud Din Ikram of the nonprofit Refugees International on the sidelines of the COP28 summit.

The U.N. Framework Convention on Climate Change (UNFCCC)'s COP Bureau, which is responsible for accrediting parties to the annual summits, decided at a November 2022 meeting to defer a decision on future Afghanistan representation.

The Taliban administration has called its COP-28 exclusion "regrettable".

"Efforts were made to have the representatives of Afghanistan participate in the 28th U.N. Climate Change Conference ... but no positive response was received," said Rouhullah Amin, head of



climate adaptation at the country's National Environmental Protection Agency (NEPA), now run by the Taliban.

The UNFCCC didn't respond to a request for comment on Afghanistan's lack of participation at COP-28.

Women make up many of the 20 million Afghans facing severe food insecurity, exacerbated by declining food aid as governments slash Afghanistan's humanitarian funding.

The Taliban's takeover of government institutions has also meant that Afghanistan is unable to access key U.N. climate funds, including the Green Climate Fund (GCF).

The GCF had approved nearly \$18 million for a sustainable energy project in Afghanistan before the Taliban's takeover. That project has now been "put on hold to allow for a full review of current and emerging risks", GCF spokesperson Stephanie Speck said.

Other proposals that the previous Afghan government had been working on sought more than \$750 million, including for projects to improve irrigation and deploy rooftop solar panels in Kabul. They, too, have been postponed, according to a NEPA document.

COP28

Over just two centuries, humans have taken a clean break from how they made sense and organised their lives since the Stone Age. The extraction of fossil fuels has created new modes of consumption. Plastic, the most ubiquitous product of the Age of Oil, which has shape-shifted into every imaginable consumable, was used in the earliest rolls of film stock. Cinema, the gift of the gilded age, owes itself to oil. Would the music industry without its start in vinyl become what it became, if not for oil? Fossil fuel and industrial capitalism not only democratised excess but shaped our very understanding of comfort, beauty and desire.

For the last two centuries, science has generally been an ally of technology, enabling new materials and goods to be made, but it has now suddenly turned adversarial. Its inconvenient truths about the conflict between industrialisation and climate processes is now asking the affluent minority of humanity — the developed world — to consciously embrace discomfort and wean off the life that they consider basic.

But would that be a life worth living? We could give up some goods, like bakelite switches, but can we give up culture and comfort? Certainly not, from what it looks like at the 'developing' end of the world. While the original climate commitment, the United Nations Framework Convention on Climate Change, envisaged a future where these two worlds would cooperate, spread the wealth, and equitably solve their way out of the crisis, things haven't quite turned out that way.

Instead, the belief that only more wealth can help us buy our way out of the crisis has gained greater ground. While we pray for the technological miracle of stumbling into the equivalent of Clean Oil, we will continue to engage on terms of mutual distrust and find small victories in newer forms of legalese. We will reassure ourselves that by flying into a different conference in a different part of the world next year, on fossil-fueled jets, we will be on our way to a "historic" solution.



KRAFT PROCESS: A PAPER-MAKER'S CRAFT

WHAT IS IT?

The kraft process is a technique that accepts wood chips as input to produce cellulose fibres, which are then used to make paper and other materials used in everyday objects. Paper is most commonly produced by the kraft process today.

The process is chemical in nature. The chips are treated with water, sodium hydroxide, and sodium sulphide – the last two forming a highly alkaline mixture called white liquor – at a relatively high temperature. This breaks the bonds between lignin (an organic polymer and important constituent of cell walls), hemicellulose (cellulose-like fibres that are shorter), and cellulose. The step is followed by those to obtain the wood pulp, wash off and recover the reaction chemicals, bleaching, and processing.

The strength of the paper produced by a chemical process like this is determined by its sulphidity, i.e. the relative amount of sulphur it contains, and kraft-process paper has higher sulphidity than that produced by other processes.

While the kraft process is ubiquitous today and replaced more toxic and resource-intensive methods to produce paper, it requires a large volume of water; the process to remove lignin from the wood chips also discharges the lignin through water along with dissolved carbon, alcohol ions, and heavy metals. While these substances can be removed from the effluent before it dissolves in a water body, the fact that they're produced at all makes the kraft process – and the human demand for paper – environmentally unfriendly.

EXPRESS VIEW ON THE MEMORY OF CHIMPS: THE TYRANNY OF RETENTION

From almonds and walnuts, to fish, milk and health drinks — there's many an old wives' tale on sharpening that most essential trait of human intelligence. Those who have never heeded these suggestions on memory improvement, need not worry. Because neither have chimpanzees and bonobos, humanity's closest living evolutionary cousins. In a study published this week in the Proceedings of the National Academy of Sciences, it was found that the apes possess long-term memories that allow them to recognise faces from decades ago. Whether with family and friends or distant acquaintance, their memory doesn't fail them.

This is not the first study that proves the cognitive competence of chimpanzees and bonobos. But what it does demonstrate is that these apes may have the longest nonhuman memory — being able to recall faces even from 26 years ago. Before this, dolphins were considered to be supreme recollectors. Their memory was accurate for up to 20 years. Elephants can keep records for up to 12 years while octopi long-term memory lasts for months. And they live for just one-five years.

It is difficult to know, of course, how proud chimpanzees and bonobos are of their cognitive feat. It is certain, however, that they have provided more ammunition to demanding Indian parents. It is only a matter of time before kids have to hear things like “even chimpanzees remember where they kept their keys”. But as much as memory, so prized in Indian learning traditions, it is important also, at times, to forget. People drink to do so. Memory, and remembering may serve to protect humans from unpleasant and dangerous situations. Yet, it can also force them to confront things they would rather not. The holiday season at the end of the year is, in a sense, a chance to forgive and forget — and rejoice in the moment. No reflection on months past or relationships



lost, deadlines missed or resolutions broken. And perhaps people — also the apes — are best served this way.

HOW DO ANIMALS SEE IN THE DARK?

Vertebrates have two types of photosensitive cells, rods and cones, so called because of their shape. The rods, which are long and fat, contain large amounts of visual pigment and they mediate vision under dim illumination (scotopic vision). The cone cells, which are relatively small, mediate daylight vision (photopic vision) and colour sensation.

The retinas of animals active both day and night, as are those of humans, contain both rods and cones. In parts of the human retina, the rods and cones are intermingled and the nervous system provides a switching mechanism that permits adjustment for light conditions.

In nocturnal animals, the optical arrangement of the eyes suggests that resolution is sacrificed for high light-gathering power.

For example, in animals such as dogs, the lens is large, i.e. it has a short focal length. In diurnal animals, the lens is smaller and the front surface is flatter. Thus the focal length is longer and so the image on the retina is larger and dimmer than in the nocturnal eye. As a result, the resolution is higher.

The retinas of diurnal animals have localised areas with a high density of cone cells. (The eyes of most birds have two such areas.)

In nocturnal animals, the retina is mainly made up of rod cells. Rhodopsin, a photosensitive pigment present in rods, is decolourised by photons (light particles) and slowly regenerated in the dark. This ensures better vision for them in dim light.

DAYDREAMING

What happens in the brain while daydreaming?

During quiet waking, brain activity in mice suggests the animals are daydreaming about a recent image (Nature). The researchers tracked the activity of neurons in the visual cortex of the brains of mice while the animals remained in a quiet waking state. They found that occasionally these neurons fired in a pattern similar to one that occurred when a mouse looked at an actual image, suggesting that the mouse was thinking — or daydreaming — about the image. Moreover, the patterns of activity during a mouse's first few daydreams of the day predicted how the brain's response to the image would change over time. The research provides tantalizing, if preliminary, evidence that daydreams can shape the brain's future response to what it sees. This causal relationship needs to be confirmed in further research, the team cautioned, but the results offer an intriguing clue that daydreams during quiet waking may play a role in brain plasticity — the brain's ability to remodel itself in response to new experiences.

URGENT NEED TO CONTROL USE OF E-CIGARETTES, SAYS WHO

E-cigarettes as consumer products are not shown to be effective for quitting tobacco use at the population level. Instead, alarming evidence has emerged on adverse population health effects, the World Health Organization said on Thursday. It added there is an urgent need to control e-



cigarettes to protect children, as well as non-smokers and minimise health harms to the population.

“Children are being recruited and trapped at an early age to use e-cigarettes and may get hooked to nicotine,” WHO Director-General Tedros Adhanom Ghebreyesus said in a statement, while urging countries to implement strict measures to prevent uptake to protect citizens, especially children and young people.

The WHO said that e-cigarettes have been allowed on the open market and aggressively marketed to young people. Thirty-four countries have banned the sale of e-cigarettes, 88 countries have no minimum age at which e-cigarettes can be bought and 74 countries have no regulations in place for these harmful products. In India, the possession of e-cigarettes and similar devices is a violation of the Prohibition of Electronic Cigarette Act, 2019, according to the Union Health Ministry.

Even brief exposure to e-cigarette content on social media can be associated with increased intention to use these products, as well as more positive attitudes towards e-cigarettes. Studies consistently show that young people who use e-cigarettes are almost three times more likely to use cigarettes later in life, the WHO said.

Alarming figures

According to data, children in the age group of 13-15 years are using e-cigarettes at rates higher than that among adults in all WHO regions. In Canada, the rates of e-cigarette use among 16 to 19-year-olds has doubled between 2017 and 2022, and in the U.K., the number of young users has tripled in the past three years.

The world organisation noted that e-cigarettes with nicotine are highly addictive and are harmful to health. While long-term health effects are not fully understood, it has been established that they generate toxic substances, some of which are known to cause cancer and some that increase the risk of heart and lung disorders. It can also affect brain development and lead to learning disorders for young people.

Foetal exposure to e-cigarettes can adversely affect the development of the fetus in pregnant women. Exposure to emissions from e-cigarettes also poses risks to bystanders.

The WHO has said that urgent measures are necessary to prevent uptake of e-cigarettes and counter nicotine addiction alongside a comprehensive approach to tobacco control, and in light of national circumstances.

RESEARCHERS PATENTING NEW TREATMENT FOR NICOTINE ADDICTION

Researchers have demonstrated a practical approach for treating nicotine dependence. Currently, Nicotine Replacement Therapy (NRT) — nicotine patches or lozenges — relies on providing additional nicotine to the body. Researchers have now turned to nicotine’s oxidative metabolite, cotinine. Using ascorbic acid as a potential reducing agent, they converted cotinine in smokers’ plasma back to nicotine, targeting both nicotine addiction and detoxification simultaneously.

Publishing the results of their study — Recirculating bioavailable nicotine metabolite using ascorbic acid: A pragmatic approach to treating nicotine dependence — a team of researchers from the Faculty of Pharmacy, Sri Ramachandra Institute of Higher Education and Research, have



developed a dissolvable film containing Vitamin C that a smoker places on the tongue whenever tempted to smoke. Ascorbic acid in a specified dose (Vitamin C) converts cotinine back to nicotine within the smokers' plasma, they claim.

Individuals find it difficult to quit smoking because of nicotine withdrawal. Current NRT products provide additional nicotine to the body. This turned researchers to cotinine. The results of the study were published in the indexed journal *Advances in Redox Research*. The team has filed for an Indian patent and has established an incubator for clinical application.

According to Murugesan Arumugam, first author: "Nicotine is metabolised into cotinine, an oxidative metabolite. Cotinine will stay in the body for six weeks (the quantity of cotinine depends on an individual's tobacco consumption). Generally, 80% of nicotine accumulates as cotinine in the body, while the remaining 20% is eliminated in urine. Cotinine can cause cancer. So, for the first time, instead of adding on to the nicotine content in the body, we have showcased that vitamin C can be utilised to recirculate cotinine. Side effects are negligible, the person does not receive additional nicotine and detoxification occurs at the end of the cycle." Raman Lakshmi Sundaram, Vishal Jayajothi, Manish Arul, Jerad A Suresh and Sathesh Kumar Kesavan are the other authors.

For the study, the researchers screened and recruited volunteers — both non-smokers and smokers. A total of 41 volunteers were screened of whom 25 met the criteria and were enrolled. All of them were men and had a median age of 21 years. Nearly 64% of the volunteers attempted to quit smoking but were unable to do so because of the severity of their withdrawal symptoms; the major being depression.

The accumulation of cotinine in the body can vary depending on the amount of nicotine consumed. Their objective was to convert cotinine into nicotine by reducing its carbonyl group. They first used a software to identify potential reducing agents and analysed the forward reaction of cotinine with various compounds. Based on their analysis using the software, they found it could be possible to convert cotinine back to nicotine using reducing agents.

GAME-CHANGER

Less than a month after the UK drug regulator approved Casgevy, the gene therapy to treat people above 12 with sickle cell disease and beta thalassemia, the U.S. FDA has approved two gene therapies — Casgevy and Lyfgenia — to treat sickle cell disease in patients over 12. Its decision on approving Casgevy gene therapy for treating beta thalassemia is expected by March 2024. These landmark decisions mark the beginning of gene therapy using the CRISPR-Cas9 tool to treat diseases that could otherwise be cured only through bone marrow transplantation. While Lyfgenia uses a disabled lentivirus as a vector to introduce into the blood stem cells a new gene for haemoglobin that mimics the healthy version, Casgevy uses the gene-editing tool of CRISPR-Cas9 to disable a particular gene (BCL11A) that turns off foetal haemoglobin production in blood stem cells. While about 10% of adults continue to produce foetal haemoglobin, in others, the BCL11A gene prevents the production of foetal haemoglobin. By disabling the BCL11A gene, foetal haemoglobin that is produced, which does not have the abnormalities of adult haemoglobin, helps treat patients with sickle-cell disease or beta thalassaemia. In clinical trials, 28 of 29 sickle-cell disease patients who received Casgevy gene therapy were relieved of the debilitating effects of the disease for a year; for beta thalassaemia, 39 of 42 patients did not require blood transfusion for one year, and in the remaining three the need for blood transfusion reduced by more than 70%. In the case of clinical trials involving Lyfgenia, 30 of 32 sickle cell disease patients did not



suffer from severe blocked blood flow caused by sickle cells, while 28 of 32 patients did not experience any blocked blood flow events six to 18 months post-infusion.

Since both gene therapies use patients' own blood cells for gene editing, the number of patients who can potentially be treated will be huge as these treatments do not rely on matching bone marrow donors. But in reality, these treatments would be exorbitantly expensive. Also, much like bone marrow transplantation, only certain hospitals will be equipped to extract a patient's blood stem cells and use the genetic editing tool to the stem cells before reinjecting them, thus limiting the number of beneficiaries. With clinical trials evaluating the therapies in a very small number of patients and for shorter duration, the compulsion to continuously monitor their safety and efficacy through real world data cannot be overemphasised: the possibility of unintended genetic modifications and their resultant side effects are real when the CRISPR-Cas9 tool is used.

THE ERA OF CRISPR THERAPEUTICS IS HERE – WHAT CAN WE EXPECT?

Imagine a future where genetic anomalies can be precisely targeted and corrected using genome editing – a giant leap from our ability to sequence or read human genomes two decades ago. The world of medicine is currently abuzz with news of regulatory agencies' approval for two highly anticipated CRISPR-based therapies for sickle-cell disease and -thalassaemia in the U.K. and the U.S. The approval is ground-breaking because it signals an era that could transform the lives of millions of patients and families grappling with these inherited blood disorders. To put this in perspective, more than a million people worldwide suffer from thalassemia, of whom 100,000 depend on regular blood transfusions. Another 20 million people around the world are estimated to be suffering from sickle-cell anaemia.

Long and short of CRISPR

The discovery of the CRISPR system was the result of almost three decades of pure academic pursuit. Clustered regularly interspaced short palindromic repeats (CRISPR) are DNA elements that Spanish researchers discovered in archaea in 1993, and named and described later in a number of bacterial genomes.

These elements contain pieces of genetic material derived from viruses that infect bacteria (for example, bacteriophages) and a set of proteins called Cas, or CRISPR-associated. Researchers tried to explain the elements' effect on antiviral immunity in 2005, but later found that CRISPR + Cas proteins could detect and prevent viral infections. That is, the two formed an antiviral defence system and helped bacteria 'acquire' resistance.

Then, in 2010, scientists demonstrated that CRISPR + specific proteins called Cas9 had the ability to cut double-stranded DNA at specific points. They also found the RNAs molecules that guided the Cas9 proteins to specific positions on a genome. And in 2012, researchers figured out a way to create synthetic RNA that could bind to Cas9 and guide it to a specific point on a DNA, where it could edit the DNA.

This pathbreaking work came from the labs of Emmanuelle Charpentier and Jennifer Doudna, and they were awarded the 2020 Nobel Prize in chemistry for it.

Virginijus Siksnys and his colleagues published similar work a few months later (despite having submitted it to the journal much earlier). This study also suggested that Cas9 could be targeted to specific genome locations by crRNA (crRNA).



In all, the researchers demonstrated the utility of the CRISPR-Cas9 system as a programmable ‘molecular scissor’ that could cut in DNA at a chosen spot with unparalleled accuracy. The specific spot could be picked by modifying the crRNA accordingly. The next year, two teams, led by Feng Zhang and George Church, showed that CRISPR-Cas9 could be used to edit the genomes of eukaryotic organisms.

This innovation has since spurred a myriad applications, from targeted genetic therapies to agricultural advancements. The 2020 Nobel Prize not only honoured the researchers: it also symbolised the start of a time in which people couldn’t just read human genomes but also edit or modify the genetic code, with potentially long-lasting impacts on the future of medicine and genetic engineering.

CRISPR in medicine

In November this year, the national regulator in the U.K., the Medicines and Healthcare products Regulatory Agency (MHRA), approved the use of a CRISPR-based method called exagamglogene autotemcel — sold under the brand ‘Casgevy’ — to treat sickle-cell disease and transfusion-dependent -thalassemia. The approval came after the MHRA evaluated safety and efficacy data in an ongoing clinical trial in 29 and 42 patients respectively.

In close succession, the U.S. Food and Drug Administration also approved Casgevy to treat sickle-cell disease, rendering it one of the first CRISPR-based therapeutics to be approved by two major drug regulators. In Casgevy, a patient’s blood stem cells are extracted, their genes modified to remove the defect that produces the sickling, and regrafted back. These cells then proliferate to produce normal red blood cells. The approvals come full circle 74 years after Linus Carl Pauling described the disease as a molecular disorder. While researchers have developed drugs to treat the symptoms of the disease, Casgevy’s approval signals their ability now to fix its molecular basis.

This said, while these approvals for CRISPR-based therapeutics are exciting, they are all based on what researchers call first-generation technologies. CRISPR-based clinical technologies have grown to become more efficacious as well as efficient, with a panoply of new applications and specificities.

One fascinating approach is called base-editing, where scientists edit genomes at the resolution of a single nucleotide (DNA is a polymer consisting of multiple nucleotides chained together).

Just a few weeks ago, Verve Therapeutics announced results from an important clinical trial it has been conducting to test a base-editing approach to treat familial hypercholesterolemia, another prevalent and oft-undiagnosed genetic disease.

Yet another emerging technique is prime editing, where researchers use a search-and-replace strategy to directly write or insert specific sequences into an existing genome with high accuracy. A fourth example is of systems that use CRISPR to modify epigenetic effects (effects of a body’s environment on its genes) in targeted fashion.

Just the start

None of these technologies are without caveats. Researchers have already reported several safety and accuracy issues. An important one is off-target events: where a CRISPR-Cas9 system becomes inaccurate and edits some other part of the genome, with unintended consequences. So while there is enormous potential for these technologies, the risk needs to be balanced with both short-



and long-term benefits. Many of these therapies are also too early in their development cycle. Continued scrutiny and surveillance may yet reveal 'side effects' that we aren't aware of today.

This said, we can still celebrate what Casgevy et al. mean for the millions of people suffering from genetic diseases, including those whose molecular mechanisms remain unknown. The future has arrived, and it looks remarkably promising.

DID COVID-19 VACCINATION HAVE A POSITIVE IMPACT ON MENTAL HEALTH?

While the benefits of vaccination in reducing the severity and mortality of COVID are well-established, its impact on mental health is a less explored area. Following COVID, there are reports of persistent mental health issues, including anxiety and depression. In a recent ICMR study, 9% of individuals who survived COVID hospitalisation were found to experience mental health challenges lasting at least one year. These conditions overlap with Long COVID, a spectrum of lingering symptoms affecting about 5% of individuals recovering from COVID, regardless of severity. Any intervention that could reduce this burden would therefore be valuable.

A recent U.K. study by Walker et al. revealed an increased incidence of mental health problems following COVID. However, this was less common among vaccinated individuals, when compared to unvaccinated people. The additional risk of depression at 6 months following COVID was 449 per 100,000 among vaccinated individuals, while it was 1009 per 100,000 among the unvaccinated.

The researchers explored the medical records of 17 million people in the U.K., comparing the incidence of eight types of mental illnesses over a timeline that extended from the pre-vaccine era until several months following the vaccine rollout. This enabled the detection of various types of COVID-associated mental illnesses, not only during the time before vaccines were available, but also afterward.

Clear difference in outcomes

During the period following vaccine rollout, the researchers found a clear difference in mental health outcomes among vaccinated individuals. They suffered less depression, anxiety and serious mental illness following COVID, compared to their unvaccinated peers. The effect was independent of whether they had prior history of mental illness. This is inferred to be due to the decreased severity of COVID-19 among vaccinated people, which could have had an indirect impact on the mental health outcomes.

While the evidence suggests a potential positive impact of vaccination on mental health, it's essential to consider the broader context, including baseline characteristics of vaccinated and unvaccinated groups. Factors such as education levels, socioeconomic status, and vaccine hesitancy may influence mental health outcomes. Additionally, the study period coincided with vaccine mandates, which could have contributed to disparities in mental health recovery.

Children and older adults have also been significantly affected by mental health issues during the pandemic, with disruptions in education, social interactions, and support systems. The overall consensus is that mental health challenges during the pandemic, often referred to as the "second pandemic," deserve increased attention.



'COMPENSATION SHOULD NOT INCENTIVISE RISK-TAKING'

Based on their experience in participating in human challenge studies — technically called the Controlled Human Infection Studies (CHIS) — (where participants are deliberately infected with disease-causing pathogens) and responses from 117 potential participants, the authors of an August 2023 paper have argued that \$20,000 for a six-month hepatitis C virus challenge study in the U.S. is “reasonable”.

The amount is five times higher than the payments given out to CHIS participants, as per a survey of 25 such studies.

Among the many contentious ethical issues that riddle the human challenge studies, disproportionate payment amounting to inducements for participation tops the list.

The ICMR's Bioethics Unit, which introduced a consensus policy statement on CHIS, says that payment should take into account the loss of wages and the time spent and efforts made while participating in CHIS. But it has made altruism central to participation.

The ICMR's Bioethics Unit emphasizes altruism in CHIS participation and considers factors like loss of wages and time spent.

Jake D Eberts, Communications Director at 1Day Sooner and participant in CHIS studies, disagrees with the ICMR's emphasis on altruistic motives for CHIS participation. Eberts argues that as long as participants understand the risks, joining a CHIS for the money is not inherently bad. Eberts, an author of an August 2023 paper, suggests that compensation for a hepatitis C CHIS study should be under \$10,000, not the proposed \$20,000. He emphasizes the importance of informed consent and an ethics review process rather than imposing a ceiling on compensation. Other researchers mention the compensation is based on study visits, duration, and inconvenience, not just inherent risks.

CT SCANS ASSOCIATED WITH INCREASED RISK OF BLOOD CANCERS

Ever since physicians started using computed tomography (CT) for medical imaging, its use grew rapidly. The benefits of CT imaging in clinically needed cases are well known. However, its potential for increased cancer risks and relatively high cumulative doses from multiple scans have raised concerns among the medical and scientific community. Sensitive sections such as children, adolescents and young adults are vulnerable and technologists must use appropriate protocols for them while they undergo CT scans.

Radiation doses at moderate (over 100mGy) to high (over 1Gy) values are known to cause haematological malignancies (blood cancers) in both children and adults and other cancers. However, there has been uncertainty about risk at low doses (less than 100mGy) that are typically associated with diagnostic CT examinations. A recent study (Nature Medicine, 9 November 2023) suggests that even low doses of radiation have a small probability of causing blood cancer.

It is a curtain down on the dose-effect controversy; low dose ionising radiation causes a finite risk not greater than what was estimated thus far from various studies. This small risk is acceptable given clinical benefits to the patient. Patients must realise that denying to undergo CT scans needed to diagnose disease is also harmful. The study highlights the need for diligently following the basic principles of radiation protection.



SIGNIFICANCE OF AN INFLUENZA A (H1N2)V CASE IN THE U.K.

On 27 November 2023, the United Kingdom Health Security Agency (UKHSA) reported the first known human case of influenza A (H1N2)v in the UK, a variant of the influenza virus previously not known to cause infections in humans. Following detection, public health agencies in the UK are now working rapidly towards characterising the pathogen and assessing the risk it may present to human health.

Several subtypes of the influenza virus are assigned according to combinations of mutations in the proteins on the surface of the virus -hemagglutinin (H) and neuraminidase (N). The former binds to sialic acid receptors in the host. New influenza viruses can emerge through a process called reassortment where the co-infecting viruses could swap genomic fragments. Influenza A H1N2 is a subtype of influenza that is endemic in pigs and is rarely reported in humans. Swine influenza viruses normally do not infect humans, however, in rare cases, sporadic infections can occur especially with close contact with animals carrying the virus. In such occurrences, the infecting influenza strain is known as a “variant virus” denoted by adding “v” after the subtype.

The case of influenza A (H1N2)v was detected as part of the comprehensive national influenza surveillance in the UK led by UKHSA. The patient, a 75-year-old individual, who has now fully recovered, presented with mild respiratory and flu-like symptoms. Genome sequencing revealed that the virus belonged to a distinct clade 1B.1.1 of influenza viruses. While distinct from recent human cases of A(H1N2), its genetic makeup showed similarity to swine influenza viruses found in the UK and no other mutations of concern have been detected in this variant. Although the patient resides in an area in proximity to pig farms, no direct contact with animals could be established. Instances of human-to-human transmission of the virus have also not yet been detected, however, the detection of the virus in a case with no contact with animals could possibly mean that a limited and undetected human-to-human transmission may have occurred. “But there is no definitive evidence,” says the WHO.

Sporadic human infections with A(H1N2)v have been detected previously. Since 2005, almost 50 cases of human A(H1N2)v infections have been reported from across the world, however, this is the first time that a case has been reported from the UK. Recently, in August 2023, a human infection was reported in the United States of America linked to an agricultural fair. Cases have also been reported in Austria, Denmark, France, Netherlands, Brazil, Canada, China and Australia. Infections with H1N2 variant viruses generally are similar in symptoms and severity to seasonal influenza viruses and there is limited evidence of human-to-human transmission. “Current evidence suggests that these swine-origin influenza viruses have limited ability for sustained transmission among humans,” the WHO says.

According to the UKHSA, the variant influenza virus presents a low risk to the general public. However, people with direct regular exposure to pigs may be at a higher risk of acquiring this virus. Influenza viruses have the potential to spill over into human populations and cause severe illnesses although the variant virus detected in the U.K. does not show any characteristics suggestive of pandemic potential. As public health authorities in the U.K. continue to follow up on the case, it is important to underscore comprehensive surveillance of pathogens, particularly rapidly evolving respiratory viruses like influenza and ability to rapidly characterise viral variants using genome sequencing forms the cornerstone of public health action and preparedness and our ability to mitigate the risk of a global outbreak.



BATTLING LONELINESS BY RECONNECTING SOCIAL LIFELINES

The World Health Organisation (WHO) has indicated that high-quality social connections are essential to our mental and physical health and our well-being. Social isolation and loneliness are important, yet neglected, social determinants for people of all ages including older people. More recently, the WHO established a Commission on Social Connection (2024–2026) with an intent to see the social isolation issue recognised and resourced as a global public health priority.

“Anyone, anywhere, can be lonely or socially isolated,” the WHO says. “Across all ages and regions, loneliness and social isolation have serious impacts on our physical and mental health, and the well-being of our communities and society.” The Commission will propose a global agenda on social connection, working with high-level Commissioners to make the case for action, marshal support to scale up proven solutions and measure progress.

As per statistics with the world health body, social isolation and loneliness are widespread, with an estimated 1 in 4 older people experiencing social isolation and between 5 and 15 per cent of adolescents experiencing loneliness. A large body of research shows that social isolation and loneliness have a serious impact on physical and mental health, quality of life, and longevity. The effect of social isolation and loneliness on mortality is comparable to that of other well-established risk factors such as smoking, obesity, and physical inactivity. Social isolation and loneliness do not just harm individuals; they also have a negative impact on entire communities and societies. Research shows that their safety, prosperity, and effective governance depend greatly on the quality of social connections within neighbourhoods, workplaces, and schools, the WHO adds.

Even before the pandemic, loneliness was a concern. A systematic review by Mareike Ernst et al in a paper in the peer-reviewed journal *American Psychologist* had this to say: “Even before the COVID-19 pandemic, social isolation and loneliness were becoming major public health and policy concerns, largely due to their serious impact on longevity, mental and physical health, and well-being”.

In context the results of the The Global State of Social Connections survey by Gallup and Meta are interesting. Meta and Gallup collaborated on two research studies, the first in 2022, revealed important variations in people’s sense of connectedness and loneliness across the seven countries studied. The 2023 report builds on that research by presenting data on connections and loneliness among people from 142 countries.

As per the results of that perception study, 72% of the people felt “very” or “fairly” connected to others; 6% did not feel connected “at all” to other people. Nearly a quarter (24%) of the global population felt “very” or “fairly” lonely, while 49% said they were not lonely “at all.” On an average, similar percentages of men and women reported feeling very or fairly connected to others (73% and 72%, respectively) or very or fairly lonely (24% each); however, there were sizeable gender differences in feelings of social connectedness and loneliness in several countries.

As per the survey, most people reported interacting with a variety of social groups at least once a day, including friends or family who live with or near them (58%) as well as neighbours or others who live nearby (46%). A third of the global population reported interacting daily with friends and family who live far away, suggesting that many people likely use some form of technology every day to foster connectedness with important people in their lives. Of the six types of social ties explored, interactions with strangers were reported least, with 16% of the global population saying they interacted with strangers at least once a day in the previous seven days.



Even with this latest perception poll, there is a substantial number of people who do feel disconnected and lonely. Clear strategies will be required from governments across the world in order to keep their residents happy. No mean task at any time, but in the current set of circumstances, increasingly so.

ANY ACTIVITY IS BETTER FOR YOUR HEART THAN SITTING

In an earlier article (July 10, 2022), we had mentioned that exercise keeps our brains young, and pointed out that regular exercise and sensible dietary choices are key elements in keeping your brain young, as is an aptitude for learning (mastering a new language, or musical instrument). Now, a study in the European Heart Journal by J M Blodgett et al. from the University College London points out that diseases of heart and circulation is the major cause of death in adults. And after analysing over 15,000 people across the world, they suggest that moderate to vigorous activity offers benefits. These involve simple activities such as running, brisk staircase climbing, and brisk exercising for about an hour. Many of us do a lot of sitting at our desks at work—all day, and then at home, watching TV or using our laptops. Thus, improving our heart and health will involve simple activities such as the ones cited above, plus sports or swimming. In addition, eating 'functional food', as we mentioned in our article 'Health benefits of functional foods' on November 12, 2023 is good for our heart and health.

Sleeping is good

Researchers at Columbia University, New York point out that even sleeping well is good for our hearts. Sleep helps maintain cognitive skills, such as attention, learning, and memory, such that poor sleep can make it much more difficult to cope with even relatively minor stressors and impact our ability to perceive the world accurately. And others at the University of Rochester point out that sleep drives metabolic clearance from the adult brain; in other words, it removes neurotoxic wastes (such as plaques called beta-amyloids which disturb communication between various brain cells) which accumulate during the active daytime work.

We adults need about seven hours of sleep each night, and switch off lights, stop reading the book, switch off TV and put our cell phones in silent mode, and have the toxins cleared. And when we retired people sleep in the afternoon after lunch, we should do so for just about an hour and then do the brisk staircase walking and get on to exercising for one or two hours. Those who play games may also do so in the evening.

When you sleep, which is the best position you choose? Here, the website called Sleep Health offers the following advice. It depends on your comfort—to your left side or right. Side sleeping rather than upright can potentially help relieve pain, reduce the risk of snoring (and disturbing others), and improves spinal alignment by reducing back pain. It also allows faster waste removal (of the so-called beta amyloid bodies) from the brain. Which side to sleep on is your choice. But use a pillow, not just your arm, so as to reduce neck pain, stiffness and headaches. Using a mattress is also helpful. It provides adequate support to the back, neck, spine and legs.

So, have a healthy sleep and dream well—for seven hours!



CUSTOMISED MRNA IS THE NEXT FRONTIER IN PERSONALISED MEDICINE

While using mRNA as medicine is new, mRNA has been inside you for your entire life. The cells in your body create mRNAs that serve as instructions to make specific proteins you need to function. Researchers can create new mRNAs to correct those instructions when they aren't working.

What does mRNA do?

To understand what the mRNAs in your cells are doing for you, let's start with its more well-known relative, DNA.

DNA is like a set of cookbooks full of different recipes, or genes, to make proteins. People make about 100,000 different proteins that are essential for normal function, such as breaking down nutrients and carrying out other important chemical reactions. When cells need to make one of those proteins, they don't read the recipe directly from DNA. Instead, they make a copy in the form of a similar molecule – that's the mRNA. The "m" stands for messenger, as mRNA contains the message, or recipe, that codes for a protein. About one-third of a cell's energy is devoted to maintaining the proteins you need, so cells are well equipped to recognise, use and then destroy mRNA once it's no longer needed.

The language of mRNA is made of four building blocks called nucleotides, nicknamed A, U, C and G. The recipe to make a protein contains only three-letter words, meaning there are just 64 possible words. Scientists know exactly which words correspond to each protein building block, so they can easily read an mRNA recipe and know what protein will be made. Mutations in the DNA cookbook can alter or delete an mRNA recipe, leading to disease-causing mistakes in critical proteins.

Why do mRNAs make great medicine?

While mRNA has been within us all along, it took decades of research for scientists to understand how cells recognise mRNA and use it to make protein. But it eventually became clear that mRNA could be a powerful medical tool.

Since scientists understand how mRNAs code for proteins, they can easily create recipes for any protein. These recipes can be edited to meet the needs of the patient, whether this means providing a whole new mRNA recipe or tweaking an existing one to make a slight variation of the protein.

Producing mRNA treatments is also scalable because scientists can make large amounts of mRNA in the lab. The method to make one mRNA is the same for all mRNAs, unlike typical drugs where each compound has its own unique chemistry and requires different manufacturing methods. It's like learning how to make risotto: Once you've learned the basic recipe, you can make endless variations.

Another benefit of using mRNAs as drugs are cells' natural ability to destroy them when they aren't needed. Since mRNAs aren't permanent, doses can be easily changed to meet the changing needs of the patient.

mRNA vaccines beyond COVID-19

The COVID-19 vaccines from Moderna and Pfizer-BioNTech are the first mRNA-based medicines to gain FDA approval. When these vaccines are injected into your arm, the mRNA is absorbed into

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some of your cells, which read the mRNA recipe and make the spike protein the virus uses to invade cells. Your immune system recognises this spike protein as foreign and makes antibodies that prepare your body to attack the virus if you encounter it later.

These mRNA vaccines demonstrate the flexibility of mRNA-based therapies. As the virus that causes COVID-19 mutates, new viral variants can evade existing antibodies and cause new waves of illness.

However, scientists are able to sequence new mRNA recipes based on these variants and tweak the vaccine recipes to match them. Boosters containing these edited recipes teach your body to make new antibodies that target the latest versions of the viral spike protein.

There are already clinical trials underway for other mRNA-based vaccines, including vaccines for seasonal flu, herpes and respiratory syncytial virus.

There are also many more vaccines in earlier stages of development to combat diseases like norovirus, Lyme disease, Zika and shingles.

mRNA as treatment for disease

The potential for mRNA-based medicine extends beyond vaccines to prevent infectious disease. One example is the use of mRNA to treat cancer.

Some mRNA cancer treatments work like vaccines by training your immune system to specifically target cancer cells. As cancer cells grow, they rapidly gain mutations in many genes. Cancer vaccines contain mRNA recipes based on mutations commonly found in certain types of tumours. When injected into the body, the mRNAs from the vaccines allow normal cells to make those mutated proteins and broadcast them to the immune system, ramping up production of antibodies. These antibodies bind to cancer cells and mark them for immune attack.

Finding the correct protein target for a given cancer is essential. Ideally, the target is unique to the cancer cell so the immune system doesn't attack healthy cells. The target protein should also be easy for the immune system to sense, making surface proteins good targets. Cancer vaccines, like BioNTech's BNT-111 for melanoma, target the most common cancer mutations in the hope of helping many patients. But patients won't benefit from the treatment if their cancer cells don't have those particular mutations.

Because it is so easy to change the mRNA recipes, cancer vaccines can be part of a personalised medicine plan where doctors sample a patient's tumour, sequence key genes and adjust the mRNA treatment to include recipes specific to that patient's cancer. Clinical trials using this personalised approach for pancreatic cancer are underway.

Future of mRNA-based medicine

Many diseases arise from cells making the wrong protein, a mutant version of protein or too little of the normal protein. If scientists can deliver a corrected version of the mRNA recipe to enough affected cells, then the mRNA will provide the means to make the proper protein.

Scientists are exploring the use of mRNA to treat heart disease, neurodegenerative disease, bone loss and much more. Although most of these studies are still very early in development, they provide hope for future treatments using mRNA for protein replacement therapies.



For example, one mRNA drug increases the formation of new blood vessels, which can improve wound healing in diabetic patients who have poor blood circulation and higher amputation risks. Another example is using mRNAs to treat propionic acidaemia, a disease where children have low levels of two liver proteins that normally prevent toxic by-products from building up in the body.

The ability to easily customise and produce mRNA increases their potential as effective, personalised therapies – with fewer side effects – that can help many people.

WHAT IS KETAMINE, THE DRUG INVOLVED IN MATTHEW PERRY'S DEATH?

More than a month after the “Friends” actor Matthew Perry suddenly passed away, the Los Angeles County medical examiner’s office on Friday (December 15) released an autopsy report, saying Perry died from the “acute effects” of ketamine.

The actor was found unresponsive in a hot tub at his home in Los Angeles on October 28, “floating face down in the heated end,” according to the media reports. He was 54-year-old. The autopsy report also mentioned that drowning, coronary artery disease and the effects of an opioid, buprenorphine, had contributed to his death.

In recent years, ketamine has been a subject of widespread debate due to its growing use for treating depression and other serious mental health issues. While some experts and patients call it lifesaving, others say it’s addictive and causes bladder ailments. Here is a look at what ketamine is, and whether it is safe to consume.

What is ketamine?

Ketamine is an anaesthetic that has been listed as a hallucinogen by the US Drug Enforcement Administration. It’s referred to as a “dissociative anaesthetic hallucinogen” because it creates a feeling of detachment from pain and the environment.

In the US, ketamine was first used as an anaesthetic for animals in the 1960s. Around a decade later, the US Food and Drug Administration approved it for humans.

The drug’s use for treating depression and other mental illnesses is recent. Owing to its powerful effects, ketamine is consumed by those patients who haven’t responded to traditional therapies. Ketamine is also used as a recreational drug, popularly known as K or Special K among clubgoers.

How is ketamine consumed?

Mental illness patients usually take ketamine through an IV, nasal spray or tablet once or twice a week for six to eight weeks (some might need it for longer). When it comes to recreational purposes, it is consumed by snorting a white crystalline powder. Ketamine can also be injected or smoked.

What are the effects of ketamine?

In a recent report, The New York Times talked to 40 ketamine patients, many of whom said the drug was like a reset button for the brain.

“During treatment sessions, they experienced pleasant visualisations, sometimes accompanied by a sense of existing outside themselves and melding with the universe. Afterwards, their daily problems seemed less weighty,” according to the report.



It also noted that ketamine garnered popularity as it affects brain receptors that traditional antidepressants do not target. “The psychedelic-like trip, many believe, is integral to the drug’s therapeutic effect,” the report said.

If taken in high doses, the anaesthetic quality of ketamine becomes more pronounced. Some may find it difficult to move and may feel numb, and can experience more graphic hallucinations. “This is sometimes called the ‘k-hole’ by users,” according to The Guardian.

Is it safe to consume ketamine?

It’s hard to say. Some doctors have emphasised that if taken only for medicinal purposes and in the right doses, ketamine is safe to consume and very effective in treating mental illnesses.

However, many patients quoted in the NYT report said the drug can be addictive and, when taken chronically in high doses, can cause severe bladder damage. “There are indications that abuse may also lead to cognitive impairment,” according to the report.

Moreover, there hasn’t been much research on prolonged ketamine treatment to determine if it’s safe or not. There is also a lack of literature on addiction and abuse among medical users.

INDIAN WOMEN IN THEIR 30S ARE EMBRACING EGG FREEZING, PRESERVING FERTILITY: WHAT’S THE PROCESS, COST AND SUCCESS RATE?

Women in their 30s in India are increasingly turning to egg freezing as a method to preserve fertility. This trend is driven by various factors, including career priorities, the desire for motherhood without a stable partner, and the need to address medical concerns such as breast cancer.

The process involves harvesting eggs at their peak condition, typically between the ages of 28 and 32. The harvested eggs are then frozen through advanced cryopreservation technology, allowing them to remain functional for a lifetime. This enables women to choose motherhood at a time of their convenience, regardless of their relationship status.

The cost of egg freezing varies between Rs 80,000 and Rs 1.8 lakh, with additional annual storage costs exceeding Rs 50,000. Despite the expense, women like Prerna emphasize the importance of considering it as an investment in securing the health of future children.

Three crucial aspects to understand about egg freezing are highlighted by Dr. Aruna Kalra. Firstly, the age at which eggs are harvested significantly impacts their quality and functionality. Second, a batch of harvested eggs can be used more than once for conception. Lastly, understanding one’s genetic history and undergoing a comprehensive fertility assessment is essential before opting for egg freezing.

“An egg or an oocyte is a delicate and the largest cell with a lot of cytoplasm. In the early days, it was a slow-freezing process, so ice crystals would form, damaging the cell matrix. Only two out of 10 eggs would survive on thawing. In these days of flash-freezing, the crystallisation is minimal. The optimal temperature for preservation is minus 196 degrees. And in a good lab, all 10 eggs are good for implanting, which means a 100 per cent recovery on thawing,” she says. Ideally, 15 to 20 eggs are frozen in batches.

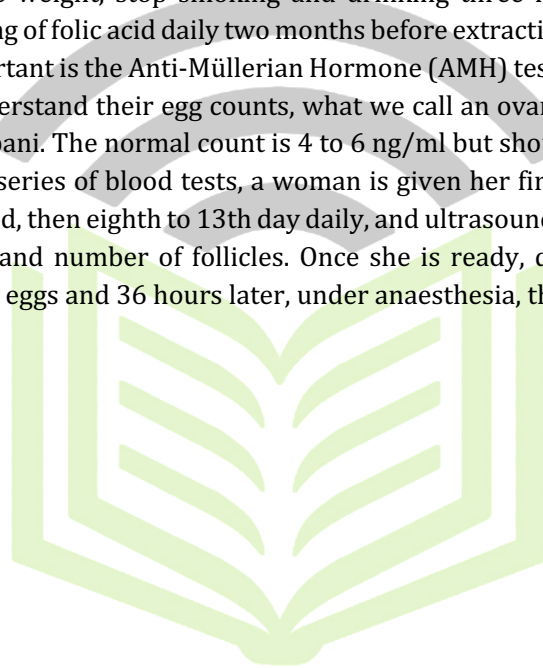


Selecting a certified lab for the egg freezing process is crucial for its effectiveness. Advances in cryopreservation technology, particularly flash-freezing, have improved the chances of successful thawing and implantation of embryos. Mumbai-based infertility specialist Dr. Anjali Malpani emphasizes the importance of choosing a reputable lab for preserving eggs, ensuring a 100% recovery rate on thawing.

Contrary to ovaries, which age over time, the uterus remains unaffected by aging. This insight suggests that preserving eggs in younger years can reduce the risk of congenital defects when having a baby in one's 40s through procedures like IVF.

HOW CAN WOMEN PREPARE THEMSELVES FOR EGG RETRIEVAL?

Exercise, eat well, lose weight, stop smoking and drinking three months before the intended procedure and take 5 mg of folic acid daily two months before extraction to eliminate birth defects. "But what's most important is the Anti-Müllerian Hormone (AMH) test, which young women must take every year to understand their egg counts, what we call an ovarian reserve, and make their decision," says Dr Malpani. The normal count is 4 to 6 ng/ml but should it hover around 2 ng/ml, it is a red flag. After a series of blood tests, a woman is given her first hormone injection on the second day of her period, then eighth to 13th day daily, and ultrasound monitoring every alternate day to gauge the size and number of follicles. Once she is ready, doctors administer a trigger injection to mature the eggs and 36 hours later, under anaesthesia, their retrieval is done.



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