

5TH TO 11TH MAY, 2024

# CURRENT AFFAIRS for UPSC

DreamIAS

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## INTERNATIONAL

### STUDENT PROTESTS IN THE US: CAMPUS AND CAMP

The detention of over 2,000 students across universities in the US and the presence of armed riot police on campuses marks a leadership failure in some of the most prestigious institutions of higher education in the world. This failure is administrative, pedagogical and more broadly, philosophical. It involves shifting answers to complex questions around free expression and security, “cancelling” and nuance, outrage and engagement. Comparisons have been made between the current protests and those in 1968. They ignore one crucial difference: In the ’60s, students formed a compact with broader society in which sections of the privileged stood with the discriminated to demand racial equality, alongside questioning the Vietnam War. The current protest, till now, seems to draw a line between the larger society, politics and the campus.

The images of the ongoing, horrific brutality by Israel’s defence forces in Gaza in the aftermath of the terrorist attacks by Hamas on October 7 will move most people emotionally — and in many cases, even politically. The passionate response from students is thus understandable and predictable. That said, the pro-Gaza “encampments” — which began with Columbia University in New York and have since spread across the country and beyond — have also been marked by maximalist slogans and demands. America’s free speech laws are almost absolute, allowing for what many would even consider hate speech. Campuses — like private workplaces — however, have their own rules regarding offence, racism, xenophobic statements and calls to violence. In situations such as the current one, university administrations have to negotiate a balance between the campus as a space for expression on the one hand and order and safety on the other. They have failed so far. The most important question that arises in the wake of the turmoil is this: Why have the most international, cosmopolitan spaces, with vast intellectual resources, floundered in creating avenues for genuine debate between competing ideas?

The inability of most institutions to effectively facilitate a conversation is being seen by many as a result of a culture of their own making. The much-discussed “cancel culture” has, at least in part, eschewed nuance for moral certainty and signalled to many that taking offence can be the basis of a political grand narrative. The “encampments” could have been a moment to teach and learn. To understand why some conflicts and victims grab more attention than others — whether in Ukraine, Palestine, Yemen or Afghanistan. And, to debate the complex nature of how multinational corporations function and how universities are funded. The US universities will, in all likelihood, emerge from this with some lessons and continue to attract students from around the world. But the moment a university has to call in the police must be one of reckoning and self-examination.

### BIPARTISAN RESCUE

In a rare display of camaraderie across the political divide, Democrats in the U.S. House of Representatives rushed to the aid of Republican House Speaker Mike Johnson and, alongside others from his party, saved his speakership from termination, by a vote of 359-43 in support of his continuance in that capacity. The threat to his role as the functional head of the lower chamber of the U.S. Congress came from far-right Republican lawmaker and unabashed supporter of former President Donald Trump, Marjorie Taylor Greene of Georgia, whose grouse with Mr. Johnson was that he had shepherded and seen through a bill to provide a \$95 billion national security aid package to Israel, Ukraine and other U.S. allies in Asia, with the bill for military support to Kyiv coming in at \$61 billion. “By passing the Democrats’ agenda and handcuffing the Republicans’

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



ability and influence legislation, our elected Republican Speaker Mike Johnson has aided and abetted the Democrats and the Biden administration in destroying our country,” Ms. Greene said, in a speech on the floor of the house that was booed by her fellow Congressmen. In March, Ms. Greene had filed a motion that would trigger a vote to remove Mr. Johnson, and earlier this week she had warned that she would be bringing that motion to a vote. While Mr. Trump is said to have complimented Ms. Greene in a post on the Truth Social platform, even he said that he believed that Republicans were “not in a position” to be voting Mr. Johnson out.

To a significant extent, the House has become the testing ground for factional supremacy within the ranks of the Republican Party, a simmering conflict that has intensified as the presidential election of November 2024 has drawn closer. The lower house witnessed a similar pattern of turmoil during the election of Mr. Johnson’s immediate predecessor, California Congressman Kevin McCarthy, who had to engineer no fewer than 15 rounds of voting to finally secure the Speaker’s chair. Ultimately Mr. McCarthy was dismissed from the role in late October 2023 when his tenure was abruptly ended by a motion to vacate foisted by members of the House Freedom Caucus. This ultra-conservative group has broadly backed the political agenda of Mr. Trump and routinely attacked ‘mainstream’ Republican lawmakers who have relied on bipartisan cooperation to get bills passed, including critical funding for U.S. allies. Even as Voting Day approaches fast from the horizon, moderate congressional Republicans are faced with the festering dilemma that to win their re-election bids they cannot be seen as spoilers who made it harder for Congress to forge critical bipartisan legislation, yet the popularity of Mr. Trump and the stubbornness of his House ideologues make it difficult for them to repudiate a more combative approach to politics.

## HOW IS THE U.K. DEPORTING MIGRANTS TO RWANDA?

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

Last week, the British authorities deported an asylum seeker to Rwanda under a voluntary returns scheme and started detaining other migrants in the country in preparation for deportations to Rwanda by July as part of an immigration law passed by the U.K. Parliament. In April 2022, the U.K. struck a deal with Rwanda to address issues related to undocumented migration. However, the relocation policy was declared unlawful by the U.K. Supreme Court. In response, the Conservative government finalised a new agreement with Rwanda to ensure additional safeguards. The new legislation allows authorities to remove asylum seekers who have made “unauthorised journeys” since January 1, 2022, to Rwanda for processing of asylum claims.

### **How was the deportation facilitated?**

The Voluntary Returns Scheme (VRS), under which the migrant was sent to Rwanda by the U.K. government, is not an entirely new programme. The plan was introduced by the Home Office in 1999 and co-funded by the European Refugee Fund. In 2002, a reintegration assistance programme was added to the scheme to help repatriated migrants meet their basic needs after arrival, such as finding a place to live, finding a job etc. The current plan is an extension of the existing VRS.

Under the new programme, the British government offers financial assistance to migrants and failed asylum seekers who opt to depart to a “safe third country,” or a country they are “admissible to.” A person is eligible to apply for the service if they have been in the U.K. illegally or have overstayed their visa; withdrawn, or want to withdraw their application to stay in the country;



claimed asylum; or have an official letter confirming that they are a victim of modern slavery. A one-off payment is available to those departing to a country recognised as developing by the Organisation for Economic Cooperation and Development (OECD). The OECD categorises Rwanda as a low-income developing country. Over the years, several individuals have been sent to Rwanda from the U.K. under the VRS. As per the latest data, 19,253 individuals were voluntarily returned from Britain under the returns scheme last year.

### **Is Rwanda safe for refugees?**

The landlocked country of Rwanda is one of the most densely populated countries in the world with a population of over 13 million people. While the country has recorded significant progress in recent years in developing its economy, it continues to feature among the least developed nations in the world.

Additionally, the government in Rwanda has been accused of stifling dissent, keeping a tight control on media and opposition, and supporting rebel groups in the Democratic Republic of Congo. "Arbitrary detention, ill-treatment, and torture in official and unofficial detention facilities were commonplace, and fair trial standards were routinely flouted in cases deemed sensitive," the Human Rights Watch noted. The agency has also highlighted how Rwanda's government has continued to exert pressure on refugees. "Refugees who are known critics of the government have been threatened and harassed. In Africa, the Human Rights Watch has documented Rwandan refugees and asylum seekers being forcibly disappeared and returned to Rwanda, or killed," it added. Around 90% of these refugees live in five camps across the country, while around 80% of the refugee population is highly vulnerable and fully relies on humanitarian assistance, according to the UN High Commissioner for Refugees (UNHCR). It is in such a context that Rwanda has now agreed to open its borders to over 50,000 more refugees in the next few years.

### **What's in it for Rwanda?**

As part of the asylum plan, the U.K. government will give development funding to the country and has promised to meet processing and integration costs for each relocated person. Britain has already paid Rwanda 220 million pounds, and the total cost is estimated to go up to 600 million pounds for 300 refugees. Despite criticism from several quarters, Rwanda's President Paul Kagame maintains that its decision to be part of the U.K.'s asylum plan is not economically driven or about "trading people," but to offer them a better chance at life.

## **IRRATIONAL ISRAEL**

When Hamas announced on Monday evening its acceptance of a ceasefire proposal mediated by Qatar and Egypt, jubilant crowds in Rafah, the besieged town in Gaza's south where over 1.4 million people have taken refuge, took to the streets in the hope that a feared Israeli invasion would be averted. But their reprieve was short-lived as Israel immediately said the proposal "doesn't meet its core demands". Israel had already announced the evacuation of over 1,00,000 people from Rafah. A day after Hamas accepted the proposal, the Benjamin Netanyahu government sent tanks to Rafah and seized the Gaza side of the strip's border crossing with Egypt. Now, Israel is practically controlling all entry points to Gaza, and most of them remain shut. To call Gaza's existing situation a disaster would be an understatement. The Israeli Defence Forces (IDF) have killed over 34,000 Palestinians since October 7. Over 77,000 Palestinians have been wounded and nearly the entire Gaza has been displaced. Its northern and central parts are already uninhabitable. The UN says there is a "full blown famine in northern" Gaza, while a hunger crisis



has spread across the enclave. Hundreds of thousands of people forced out of their homes in the north and centre, where IDF soldiers have been deployed, are now living in temporary shelters in Rafah. And the Israelis are again asking them to evacuate.

When Israel came under a gruesome attack on October 7, the world expressed its solidarity with the Jewish nation. But the way Israel has conducted its war on Gaza ever since is not different from what Hamas did to the Israelis. Mr. Netanyahu's government unleashed a collective punishment on the entire population of Gaza, with support from powerful allies in the West. But despite the disproportionate use of force against the Palestinians, Israel's military performance is a far cry from what it was known for decades ago. Israel has neither managed to defeat Hamas nor get the hostages released. If Mr. Netanyahu goes ahead with the plan to invade Rafah, he would be making a terrible mistake. If the war comes to an end, he might face challenges to his political career. But if the war goes on forever with more killings of Palestinians, the state of Israel, already isolated and facing a genocide case at the UN's top court, would be weakened further internationally. The only practical way out of this humanitarian and political calamity and moral abyss is a quick negotiated ceasefire that would see the release of all hostages and an IDF withdrawal. Even Hamas, undoubtedly a ruthless terrorist organisation that would not baulk at inflicting suffering on the very people it claims to represent, has shown a willingness to sign a deal. The question is whether Mr. Netanyahu is ready or not.

#### EXPLAINED: HISTORY OF INDIA AND NEPAL'S BORDER ISSUE

Nepal's cabinet last week decided to put a map on its Rs 100 currency note showing certain areas administered by India in Uttarakhand as part of its territory, provoking External Affairs Minister S Jaishankar to say that such "unilateral measures" by Kathmandu would not change the reality on the ground.

The territorial dispute is about a 372-sq-km area that includes Limpiadhura, Lipulekh, and Kalapani at the India-Nepal-China trijunction in Uttarakhand's Pithoragarh district. Nepal has claimed for long that these areas belong to it both historically and evidently.

The map was adopted by consensus in Nepal's Parliament four years ago. The Prime Ministers of India and Nepal have agreed to have the boundary issue examined and settled through diplomatic channels. Following the Nepal cabinet's decision, Jaishankar said on May 4 that "discussions about our boundary matters [are ongoing] through an established platform", but it would appear that Kathmandu is not happy with the pace and urgency of that process.

Unlike in 2020, when the new map was adopted, the May 2 decision to put it on the currency note has met with scepticism and criticism in Nepal.

#### Genesis of the issue

The Treaty of Sugauli at the end of the Anglo-Nepalese War of 1814-16 resulted in Nepal losing a chunk of territory to the East India Company. Article 5 of the treaty took away the jurisdiction of Nepal's rulers over the land to the east of the Kali River.

Buddhi Narayan Shrestha, an expert on boundaries, said that maps issued by the British Surveyor General of India in 1819, 1821, 1827, and 1856 showed the Kali River as originating in Limpiadhura. The next map, published in 1879, used the name of the river in the local language: "Kuti Yangti".





The map that was published in 1920-21 retained the name Kuti Yangti — but it identified a different “Kali”. This new Kali was shown as a stream originating from a temple site, and joining the main stream about a kilometre downstream. However, the last map issued by the British before they left India in 1947 showed the initial position of the Kali River originating in Limpiadhura, Shrestha said.

According to Shrestha, villages in this area — Gunji, Nabhi, Kuti, and Kalapani, also known as Tulsī Nyurang and Nabhidang — were covered by the Nepal government census until 1962, and the people paid land revenue to the government in Kathmandu. However, the situation changed after the war between India and China that year.

Bishwabandhu Thapa, a former Home Minister of Nepal who is now 93, said India’s Prime Minister Jawaharlal Nehru approached King Mahendra of Nepal asking for permission to use Kalapani, which was strategically located close to the trijunction, as a base for the Indian Army.

Dr Bhekh Bahadur Thapa, who served as Nepal’s Foreign Minister in 2005-06 and as Ambassador to India during 1997-2003, said that even though Indian officials claimed in bilateral talks later that King Mahendra gifted the area to India, the issue was never resolved.

#### **India-Nepal talks**

Several prominent personalities who have officially represented Nepal in bilateral talks claimed that Prime Minister I K Gujral (April 1997-March 1998) had promised to give up these areas if Nepal was able to produce evidence for its claim.

In July 2000, Prime Minister Atal Bihari Vajpayee assured the visiting Nepal PM G P Koirala that India had no interest in even an inch of Nepali territory — however, the mechanism led by the two foreign secretaries did not make progress.

The visit of Prime Minister Narendra Modi to Nepal in 2014 gave rise to hopes of a resolution of all contentious issues. He and his Nepali counterpart, Sushil Prasad Koirala, agreed to set up a boundary working group for speedy settlement of the border issue in Kalapani and Susta, a 145-sq-km area that had fallen on the Indian side after the River Gandak changed course.

After returning from India on June 3 last year, Nepal’s Prime Minister Pushpa Kamal Dahal Prachanda claimed that Modi had assured him that the border issue would be sorted out at the earliest; however, there was no mention of this in the official statement at the end of the official visit.

#### **Frictions in bilateral ties**

The goodwill of the 2005-14 period when India mediated the transition of the Hindu Kingdom into a secular federal republic, evaporated in 2015 after the Maoists rejected outright the suggestion of New Delhi, conveyed through then Foreign Secretary Jaishankar, that Nepal’s new constitution should be delayed until the concerns of the Terai parties were addressed.

The 134-day blockade of Nepal that began in September 2015 created significant distrust against India, and K P Sharma Oli, who took over as Prime Minister that October, quickly moved to sign a trade and transit agreement with China in order to create a fallback source for the supply of essential goods.



In February 2018, Oli, chairman of the Communist Party of Nepal (Unified Marxist Leninist), returned as Prime Minister with a massive mandate in the first election held under the new constitution. In 2020, he took the lead to build the consensus in Parliament for Nepal's new map that formally included the 372 sq km in Uttarakhand, and pledged to bring it back.

India decried Nepal's "cartographic aggression" as unacceptable, but said the issue would have to be sorted out through diplomatic channels, on the basis of evidence. It is noteworthy that the cabinet decision on printing the new Rs 100 notes has come less than two months after Oli's party joined the ruling coalition in Nepal.

While the manifesto of Oli's CPN (UML) promised to bring these areas into Nepal, successive governments in Kathmandu have over the years taken up issues of "border encroachment" with both India and China, Rajeshwar Acharya, Nepal's former Ambassador to China, said.

### **2024 different from 2020**

Unlike 2020, when the new map was adopted by Parliament, there is no visible consensus on putting the map on the currency note. The UML and Prachanda's CPN (Maoist Centre) are together in the ruling coalition, but the Nepali Congress, the main opposition and largest party in Parliament, is yet to make a statement on this issue.

Chiranjivee Nepal, economic advisor to President Ram Chandra Poudel and a former Governor of Rashtra Bank, Nepal's central bank, has described the cabinet decision as "unwise" and "provocative". Many others, too, believe the issue should be settled through dialogue without actions that may invite extreme steps by India. However, based on a preliminary assessment, the government appears hopeful that with better road connectivity with China, the hardships of Nepalis in the event of a 2015-like blockade will be far less.

Nepal sorted out its boundary issues with China in the early 1960s through bilateral meetings of the boundary commission. Nepal's former Prime Minister Kirtinidhi Bista had once quoted his Chinese counterpart Chou En-lai as saying that border issues, if left unresolved, turn into problems for the future generations that are difficult to address.

Despite the in-principle agreement on resolution through appropriate platforms based on evidence, India and Nepal have not fixed a timeframe or called a meeting for the purpose.

### **ON MYANMAR, INDIA NEEDS A RETHINK**

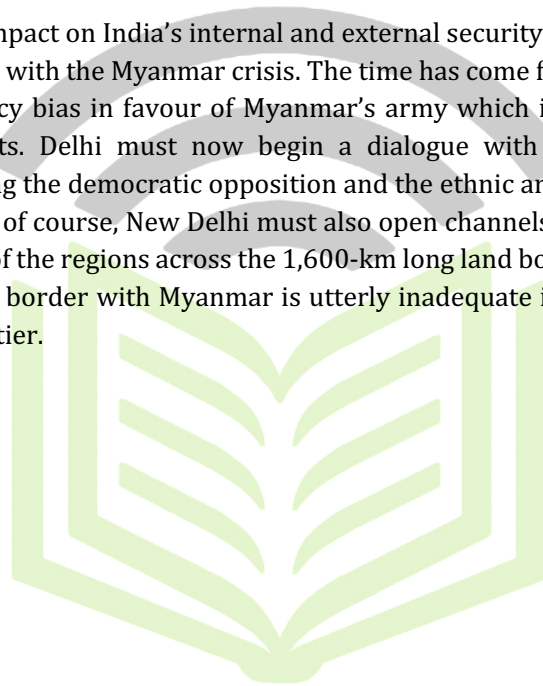
Last week, Myanmar's army claimed success in retaking Myawaddy, a critical node in the bustling trade route with its eastern neighbour, Thailand. The anti-government coalition of the ethnic armed groups and the pro-democracy fighters had created a flutter in the region by entering Myawaddy in mid-April and ousting the troops from the army base there. The real winner in the see-saw battle now appears to be the notorious Border Guard Force (BGF) in the region, formally aligned with the military government in Yangon, but with great autonomy on the ground. The BGF is reportedly playing both sides in order to expand its own regional dominance. It also presides over a massive regional criminal network that operates gambling casinos, drug trade, and illegal trafficking on the Thai border. The battle for Myawaddy captures the larger story of the breakdown of the state in Myanmar.

Since its independence, Myanmar never enjoyed sustained control over all its territory. The conflict between the majority Barmars and several ethnic minority groups has left the state's



control over its frontiers shaky. But the situation has never been as grim as it is today. Since the unpopular and ineffective 2021 coup, the army has lost control over much of the troubled nation as the pro-democracy Bamar groups joined hands with the ethnic armed groups to end army rule. The country's frontiers have always drawn trans-border networks of illegal groups. That attraction has grown now. As the threat from the collapsing authority of the Myanmarese state envelops the rest of the region, the intervention of external powers has become acute. While the main regional forum ASEAN has been unable to deal with the challenges, the great powers are stepping in. In the name of stabilising its frontier with Myanmar, China has inserted itself deeper into the nation's internal affairs. The US supports the country's pro-democracy movement and has given nearly \$500 million assistance under the Burma Act of 2021. Some of this includes non-lethal military support.

Despite its profound impact on India's internal and external security, there has been little debate in Delhi on how to deal with the Myanmar crisis. The time has come for the Indian government to rethink its earlier policy bias in favour of Myanmar's army which is no longer in a position to secure India's interests. Delhi must now begin a dialogue with Myanmar's National Unity Government comprising the democratic opposition and the ethnic armed groups. While it should engage with the Army, of course, New Delhi must also open channels of communication with the local forces in control of the regions across the 1,600-km long land border with Myanmar. Playing defence by fencing the border with Myanmar is utterly inadequate in coping with the challenge on India's eastern frontier.



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## NATION

### WHAT IS THE BANNED ORGANISATION SIKHS FOR JUSTICE?

Delhi Lieutenant-Governor V K Saxena on Monday recommended a National Investigation Agency (NIA) probe against jailed Delhi Chief Minister Arvind Kejriwal for allegedly receiving political funding from Sikhs for Justice (SFJ), a New York-based pro-Khalistan organisation that is banned in India.

Sources in the LG House told The Indian Express that the recommendation was made based on a complaint by Ashoo Mongia of the World Hindu Federation, a diaspora-based Hindu advocacy organisation. Mongia alleged that Kejriwal's Aam Aadmi Party received \$16 million from SFJ for "facilitating the release of Devinder Pal Bhullar and espousing pro-Khalistani sentiments".

#### **What is Sikhs for Justice (SFJ)?**

SFJ was founded in 2007 by Gurpatwant Singh Pannun, a US-based attorney who is currently in his late 40s. According to its website, SFJ seeks to achieve "self-determination for the Sikh people in their historic homeland" in "Indian held Punjab", and "establish a sovereign state, popularly known as Khalistan".

"It was formed with the overt recognition that the wanton use of violence had been the Khalistan movement's Achilles heel," Terry Milewski, Canadian journalist and the author of Blood for Blood: Fifty Years of the Global Khalistan Project (2021), had previously told The Indian Express. Pannun's motto was "ballots not bullets", Milewski said.

Thus far, SFJ's most notable activity has been the so-called 'Referendum 2020' for the secession of Punjab — specifically the Indian state and not the Pakistani province — held among the Sikh diaspora in some cities.

"The rules and identification requirements are farcical," Milewski told The Indian Express. "I have a friend in London who logged on online to register to vote, put down Angelina Jolie as his name, and was successfully registered for the vote. Pannun and his ilk put up random, unverifiable numbers hailing the referendum's success," he said.

#### **Doublespeak of Pannun, SFJ**

Despite supposedly "turning a page" from the violence-ridden Khalistan movement of yesteryears, SFJ and Pannun have not been shy to glorify terrorists and mass murderers.

For instance, the campaign headquarters for the 'referendum' in Canada is named after 'Shaheed' (martyr) Talwinder Singh Parmar, the mastermind behind the 1985 Air India bombing which killed 329 innocents, and remains the most deadly mass murder in Canadian history. SFJ has also repeatedly hailed Indira Gandhi's killers, Beant Singh and Satwant Singh. In a viral video from 2020, Pannun promised to gift new iPhones to anyone who flew the Khalistan flag in honour of 'Shaheed' Beant Singh.

"Terrorists have been an absolutely essential part in SFJ's iconography ... SFJ has completely contradicted themselves," Milewski said. And SFJ does not stop at simply glorifying terrorists. Pannun himself has often mounted veiled threats at Hindus and other non-Sikh members of the Indian diaspora.



### Banned in India

India refers to Pannun as a terrorist, and has banned SFJ under the Unlawful Activities (Prevention) Act, 1967. The Home Ministry's 2019 notification issuing the ban says: "In the garb of the so-called referendum for Sikhs, SFJ is actually espousing secessionism and militant ideology in Punjab, while operating from safe havens on foreign soils and actively supported by inimical forces in other countries."

Currently, almost a dozen cases are registered against Pannun and SFJ in India.

### CHARANJIT CHANNI'S COMMENTS ON THE POONCH TERROR ATTACK: PETTY POLITICS

In the cut and thrust of an election, barbs are exchanged, and accusations made. Much of this is, of course, campaign rhetoric. Yet, even after accounting for what is par for the course during electioneering, the back-to-back statements by former Punjab chief minister and Congress Working Committee member Charanjit Singh Channi cross an important line. On Sunday, Channi all but called the attack by militants in Poonch — in which an Indian Air Force corporal was killed and four others injured — a false flag operation. "This is a stunt to make the BJP win, there is no truth in it. Getting people killed and playing politics over their bodies is what the BJP does," he said. This even as his leader Rahul Gandhi called the attack "sad and shameful". The BJP accused Channi of disrespecting military personnel's sacrifice and demanded an apology from the Congress leadership. Rather than doing so, Channi doubled down a day later. While he expressed pride and admiration for soldiers, he also accused the BJP-led government of not doing enough to probe the 2019 Pulwama attacks — in which 40 soldiers were killed — for political reasons.

In a vibrant democracy, national security should be debated and some of its aspects even contested. Of course, security and safety of military personnel is a very valid issue for debate. What is not is to bring in the imperatives of electoral politics to a terrorist attack. Senior leaders of the ruling party and government have often alluded to military operations to score political points on the campaign trail. One popular refrain has been to underline how the government goes "inside enemy territory to strike" (ghar mein ghus ke maartein hain) or how a political party has been a "disciple" of Pakistan.

This conflation of military operations, national security, and muscular nationalism may be good politics but it's certainly not good strategy. Mud flying thick and fast on the campaign trail doesn't exactly lend itself to reasoned debate and discourse on national security. It also reduces the sacrifices of India's armed forces a pawn in games of political one-upmanship. That's why the Congress should get Channi to apologise to the families of the soldiers — and accept that he crossed a line.

### WILL R&AW'S OVERSEAS OPERATIONS AFFECT TIES?

Why have the U.S., Canada, Australia and Pakistan brought up allegations that the agency has spearheaded targeted killings and surveillance of separatists on their soil? What is the Indian government's stand? Do these operations follow certain norms, especially if it's a friendly country?

#### The story so far:

India's external intelligence agency R&AW (Research and Analysis Wing) was in the spotlight this week, as reports came in from the U.S., Canada, Australia and Pakistan of the alleged targeting and



killing of Indian-origin Khalistani separatist operatives around the world, spearheaded by the agency.

#### **What are the charges?**

The charges, that are yet to be proven in court, pertain to a number of investigations in different countries. This week, the U.S.-based *Washington Post* claimed that American officials believe that the R&AW's previous chief Samant Goel had approved an assassination operation, that was foiled last year, against Gurpatwant Singh Pannun, a Khalistani activist lawyer of U.S. and Canadian nationality on India's most-wanted UAPA (Unlawful Activities Prevention Act) terror list. It also revealed the name of a security official, Vikram Yadav, believed to have been at R&AW at the time, and said U.S. officials had discussed whether to indict him for ordering Indian businessman Nikhil Gupta to hire a hitman for the job. In the indictment filed by the U.S. New York Southern District Attorney's office last November, message transcripts indicated Mr. Gupta had also enquired about ordering a "hit" on a Khalistani activist in Canada, just days before the killing of Canadian Hardeep Singh Nijjar outside Toronto in June 2023.

On Friday, the Royal Canadian Mounted Police arrested and charged three Indian nationals, all in their twenties, for conspiring in the Nijjar killing, and said they are investigating links to Indian government officials. Canadian Prime Minister Justin Trudeau's statement indicating a link to Indian agencies, as well as his decision to expel India's intelligence station chief at its High Commission in Ottawa, had sparked a major clash with New Delhi, leading to a number of diplomatic measures and expulsions of Canadian diplomats as well.

On Tuesday, Australia's public broadcaster *ABC* also reported that R&AW operatives had been expelled in 2020 after Australian Security Intelligence Organisation (ASIO) concluded that they ran a "nest of spies" that carried out espionage activities and surveillance of Khalistani separatists in the country. Meanwhile, Pakistan's Foreign Ministry, which has consistently accused R&AW agents of orchestrating a number of extra-judicial killings on its soil, also doubled down on its allegations against India this week. The latest charges have also revived allegations in the U.K. that Indian intelligence agents had trailed and threatened a Khalistani separatist leader Avtar Singh Khanda, who also died in June last year, and was being treated for leukaemia.

#### **How has New Delhi reacted?**

The Ministry of External Affairs has consistently held that extra-judicial killings are not "government policy", and called the *Washington Post* article "unwarranted and unsubstantiated". However, two issues cast a cloud over New Delhi's statements. One, the variance in the government's responses on U.S., Canada, Australia and Pakistan: silence on Australia; angry denials and punitive measures against Canada; the setting up of a "high level inquiry" into the U.S.'s indictment; and an unabashed acceptance by top leaders that the government has killed terrorists inside Pakistan. "Today, India doesn't send dossiers. *Aaj Bharat ghar mein ghus ke marta hai* (Today India kills terrorists in their own homes)," Mr. Modi said at an election rally in Gujarat this week, ostensibly referring to strikes in 2016 and 2019 on Pakistan, but possibly to other operations as well. Secondly, Indian operations against Khalistani sympathisers have a long history. In 2019, A German court handed prison sentences to an Indian couple charged with spying on Khalistani and Kashmiri activists in the country and sending information to a R&AW official.

Indian officials have questioned why the U.S., Canada, the U.K. and Australia don't take action against vocal Khalistani activists like Pannun and Nijjar themselves, who are accused of inciting attacks on diplomatic missions and threatening Indian diplomats in those countries. They cite a



similar refusal by the Canadian government in the 1980s, to act against Khalistani activist Talwinder Singh Parmar, which allowed him to orchestrate the bombing of an Air India plane 'Kanishka' in 1985, one of the worst such terror attacks in which 329 were killed. Parmar was killed during a visit back to India in 1992 in a gunfight with Punjab police.

#### **Will there be a diplomatic fallout?**

With the exception of Pakistan, and now Canada, India's ties with the countries where such operations have allegedly been carried out remain strong. Ties with Canada had seen a brief détente in the past decade but historically, no Indian Prime Minister has made a bilateral visit there since 1973, mainly due to tensions over the Khalistan issue. The issue of Pakistan's support to cross-border terrorism in Jammu & Kashmir and Punjab has led to a nearly-irreversible break in bilateral ties.

However, it is clear that countries like the U.S., the U.K. and Australia are keen to keep ties on an even keel, while they complete investigations and urge India to do the same. As a result, leaders in those countries have barely referred to the cases publicly, unlike Mr. Trudeau. On a number of occasions, including this week, the U.S. White House and State department have issued statements on the Pannun case. "We continue to expect accountability from the Government of India based on the results of the Indian inquiry committee's work, and we are regularly working with them and enquiring for additional updates," Principal Deputy Spokesperson for the State Department, Vedant Patel, said in response to a question about the *Washington Post's* article this week.

According to sources, more has been said behind the scenes. U.S. officials who have visited New Delhi since the Pannun case hit the headlines are understood to have conveyed the U.S.'s 3-step demand: that New Delhi thoroughly investigate the Pannun case and accept any wrongdoing publicly, that it resolve not to repeat such operations, and thirdly, that it must ensure "legal accountability" in Indian courts for those responsible. Much will also depend in the next few months on the trial process in both the U.S.'s Pannun case and the Canadian Nijjar case, and how many new credible leads are provided to prove Indian involvement in them. At present, Mr. Gupta is in the Czech Republic, pending an appeal against his extradition, but his testimony is expected to be crucial in the investigations.

India is certainly not the only country to be accused of carrying out extra-judicial, extra-territorial attacks, and the U.S., Israel etc. cite the UN charter on self-defence when carrying out killings of those wanted within their country. In the shadowy world of intelligence agencies, however, more informal rules apply: that such operations must not be executed in friendly countries, that there should be no links between the operatives and diplomatic missions, and finally, that they don't get caught.

#### **WHY DID INTERPOL ISSUE A BLUE CORNER NOTICE AGAINST PRAJWAL?**

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

Amid a political storm in Karnataka over grave allegations of sexual abuse against Prajwal Revanna, sitting Hassan MP and grandson of former Prime Minister H.D. Deve Gowda, the International Criminal Police Organisation, commonly known as Interpol, has issued a blue corner notice against the absconding politician. The MP has been on the run since late last month following the leak of thousands of explicit video clips that allegedly show the 33-year-old sexually abusing multiple women, prompting the JD(S) to suspend him.





### How does the Interpol alert countries?

The Interpol is an inter-governmental law enforcement organisation which assists and facilitates cooperation between national law forces in 196 member countries to combat transnational crimes. The organisation shares information regarding crimes and wanted criminals globally, and provides technical, operational, and investigative support to locate fugitives.

It manages a database of critical data about wanted criminals, which member countries can use to trace such individuals.

The agency has a National Central Bureau in all member countries which is a single point of contact between law enforcement agencies of that country and Interpol.

The Central Bureau of Investigation (CBI) is officially designated as the nodal agency for India.

The agency uses a 'colour-coded' system to alert and share requests for crime-related information among member countries and global organisations. Notably, member countries are not bound by international law to abide by Interpol notices as they are entirely discretionary.

### Why did Interpol issue a blue corner notice against Prajwal Revanna?

The international organisation issues a blue corner notice when the case is related to missing persons. Also called an "enquiry notice," such an alert is sent for additional information from member states about a person, to verify their identity, location, or criminal record concerning a criminal investigation.

It is different from a red corner notice, considering that the purpose of a blue notice is information about a person of interest in an investigation, while the former is generally issued against a person wanted for extradition, or serve a sentence based on a court decision, or a similar lawful action.

Interpol issued a blue corner notice against Mr. Revanna after the Special Investigation Team (SIT) formed by the Karnataka government sought the help of the CBI for further inquiry.

The SIT first issued a look out circular against the Hassan MP after he failed to appear before the panel. The request came days after the Hassan MP remained untraceable. As per reports, the MP left for Munich, Germany using his diplomatic passport a day after his constituency went to the polls in the second phase of the Lok Sabha elections on April 26, and hours before the SIT was constituted.

Mr. Revanna's advocate sought seven days for his client to present himself before the panel. The investigating team, however, ruled out the possibility and moved for a blue corner alert against Mr. Revanna, considering that the investigation is in the early stages and the police are yet to file criminal charges.

The SIT officials told Karnataka Chief Minister Siddaramaiah that they intend to arrest the accused to expedite the investigation as soon as they receive information about his whereabouts.

### WHAT WAS THE BARODA DYNAMITE CASE, IN WHICH GEORGE FERNANDES WAS SENT TO TIHAR JAIL?

While hearing arguments on Tuesday (May 7) on granting interim bail to Delhi Chief Minister Arvind Kejriwal to enable him to campaign in the ongoing Lok Sabha election, the Supreme Court





mentioned George Fernandes — recalling in passing that he had contested an election from jail, and had won by a huge margin.

There is no similarity between the cases of George and Kejriwal beyond the fact that both politicians went to jail. Unlike George, Kejriwal is not a candidate in the ongoing election; and unlike Kejriwal, George did not hold government office when he was arrested. The nature of allegations against them are also entirely dissimilar.

But George, who passed away in 2019 at the age of 88, is a remarkable figure in the political history of India. This is the story of his winning the Lok Sabha election from jail.

### **George Fernandes, the man**

A firebrand trade union leader who was originally from Mangalore (Mangaluru), George moved to Bombay (Mumbai), and won his first Lok Sabha election from the Bombay (South) constituency in 1967 on Samyukta Socialist Party (SSP) ticket, defeating Congress stalwart S K Patil. However, in the 1971 election, George came third at the same seat.

In 1977, he won the Muzaffarpur seat in Bihar on a Janata Party ticket — this was the election that he contested while being in jail. George went on to represent Muzaffarpur in Lok Sabha on Janata Dal tickets in 1989 and 1991, and Nalanda, also in Bihar, on Samata Party tickets in 1996, 1998, and 1999. He returned to Muzaffarpur on a Janata Dal (United) ticket in 2004, and won.

After being denied the party's nomination in 2009, George contested as an Independent and lost; however, Nitish Kumar, the JD(U) chief, sent him to Rajya Sabha that same year. George served in the Upper House until 2010. He passed away after a prolonged illness on January 29, 2019.

A fearless activist, George was behind India's biggest railway strike in 1974. In politics, he was active until 2004. He was the convener of the original National Democratic Alliance (NDA), and Defence Minister in the government of Prime Minister Atal Bihari Vajpayee.

### **Fighting election from jail**

George went underground when the Emergency was declared on June 25, 1975, but he was arrested in Calcutta (Kolkata) on June 10, 1976. He was charged in the infamous Baroda Dynamite Case (details in next section), and lodged in Tihar jail in Delhi.

The Emergency was lifted in 1977, and elections were announced. George was in favour of boycotting the polls, but was persuaded by Morarji Desai, who went on to become India's first non-Congress Prime Minister, to contest.

While George himself remained confined to Tihar, hundreds of his friends and followers from various states, including trade unionists from Bombay, students and Lohiaite teachers from Delhi University, and youth supporters from all over the country fanned out in his constituency to campaign. His mother Alice Fernandes, and brother Lawrence Fernandes, too joined the campaign.

Out of the 5.12 lakh votes polled, George got 3.96 lakh, which was more than 78%, while Congress candidate Nitishwer Prasad Singh got only a little more than 12%. George became a minister in Desai's government, and was given charge first of Communications, and then of Industry.



### The Baroda Dynamite Case

George, along with two dozen others — including then Rajya Sabha member Viren J Shah (who went on to serve as Governor of West Bengal), the Bombay socialist leader GG Parikh, then reporter of The Indian Express in Ahmedabad Kirit Bhat, and then reporter of The Times of India in Baroda K Vikram Rao — was booked for waging war against the state.

According to the charge sheet, police found 836 sticks of dynamite and fuse wires from the premises of a private transporter in Vadodara on March 8-9, 1976. The CBI took over the investigation on March 23, 1976. Two cases were registered by Delhi Police, which too, claimed to have recovered explosives, and three cases were registered by Bombay Police in connection with an explosion at a railway bridge in that city. All these cases too, were transferred to the CBI. Together, these cases constituted the Baroda Dynamite Case.

CBI filed a charge sheet on September 23, 1976. George was accused of procuring large quantities of dynamite and accessories with the objective of overawing the government by blowing up road and rail bridges, disrupting communications, and creating conditions of chaos and anarchy.

The trial was held at the court of the Chief Metropolitan Magistrate in Tis Hazari in Delhi. On the dates of hearing, police would bring George before the court in handcuffs. An iconic picture of George shows him in handcuffs.

Efforts to withdraw the case began immediately after the Janata Party government took oath on March 24, 1977. By then, George had already been released. K Vikram Rao, one of George's co-accused, told The Indian Express on Wednesday: "We were released on March 22 (1977), the day the results of the Rae Bareilly Lok Sabha seat was declared (and Indira Gandhi was defeated)."

On March 26, an application for withdrawal of the case was moved in the court of Chief Metropolitan Magistrate M Shamim, which said that "in public interest and changed circumstances, the Central Government has desired to withdraw from the prosecution of all the accused". The magistrate agreed to allow the withdrawal of the case.

However, two criminal revision petitions were filed in Delhi High Court — by Bal Krishna Gupta on March 31, 1977, and R K Jain on May 13, 1977 — against the order. Both petitions were dismissed by the High Court.

Subsequently, a Special Leave Petition was filed in the Supreme Court against the High Court order. On May 3, 1980, the top court dismissed the petition, along with other similar petitions.

### CHARGES FRAMED AGAINST BRIJ BHUSHAN: WHAT DOES THIS MEAN?

A trial judge in Delhi framed charges against BJP MP and former Wrestling Federation of India chief Brij Bhushan Sharan Singh under Sections 354 (assault or criminal force to woman with intent to outrage her modesty) and 354A (sexual harassment) of the Indian Penal Code, 1860, on Friday. Singh has been accused of sexual harassment by several women wrestlers.

#### Framing of charges

After police register an FIR and conduct an investigation, they file a chargesheet in the trial court detailing the offences allegedly committed and the evidence collected during the investigation. Police filed a 1,500-page chargesheet on June 15 last year, charging Brij Bhushan with Sections 354, 354A, and 354D (stalking).

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The Rouse Avenue court that framed charges under IPC Sections 354 and 354A, noted that it has found sufficient material to frame charges for the offence of criminal intimidation in the allegations of two of the complainants.

The framing of charges means the trial judge has found a prima facie case against the accused, based on the material in the chargesheet. This is not a determination of whether the accused has committed the alleged offences — it is only an acknowledgment that sufficient grounds exist to proceed with the trial.

After the trial judge frames the charges, the accused can plead innocent or guilty. If the accused pleads innocent, the next step is the summoning of witnesses for cross-examination by the defence lawyer(s). After witnesses are examined, both sides present their arguments. Upon completion of arguments, the judge may reserve judgment. If the judge decides to convict the accused, the court will also pronounce the sentence.

Sections of IPC Sections 354 and 354A, along with Sections 354 B-D are often classified as “offences against women”. Section 354 states that whoever assaults or uses criminal force against a woman “intending to outrage or knowing it to be likely that he will thereby outrage her modesty” shall be punished with a term of imprisonment between 1 and 5 years and/or a fine.

The phrase “outrage her modesty” is not defined in the IPC. However, the Supreme Court in *State of Punjab v. Major Singh* (1996) held that “...the essence of a woman’s modesty is her sex. The modesty of an adult female is writ large on her body. Young or old, intelligent or imbecile, awake or sleeping, the woman possesses a modesty capable of being outraged.”

Section 354A deals with sexual harassment, which is defined by any of four acts. First, “physical contact and advances involving unwelcome and explicit sexual overtures”; second, “a demand or request for sexual favours”; third, “showing pornography against the will of a woman”; and fourth, “making sexually coloured remarks”.

The first, second, and third acts are treated more severely, and carry a punishment of up to 3 years in prison and a fine. The fourth act can be punished with a term of up to 1 year and a fine.

The trial judge has also seen fit to frame charges of criminal intimidation against Brij Bhushan, which is defined in Section 503 of the IPC. It states that anyone who threatens another person with an “injury to his person, reputation or property” with the intention to “cause alarm to that person, or to cause that person to do any act which he is not legally bound to do, or to omit to do any act which that person is legally entitled to do”, is guilty of criminal intimidation.

Section 506 lays down the punishment for criminal intimidation: up to 2 years’ imprisonment, which can extend to 7 years if the person threatens to cause death, grievous hurt, destruction of property by fire, “impute unchastity to a woman”, or commit an offence punishable with death, life imprisonment, or up to 7 years’ imprisonment.

#### UNNATURAL SEX WITH WIFE NOT OFFENCE UNDER IPC SECTION 377: MADHYA PRADESH HIGH COURT

Observing that marital rape has not been recognised so far in India, the Madhya Pradesh HC ruled that unnatural sex by a husband with his legally wedded wife residing with him is not an offence under IPC Section 377.



The HC said, in view of the amended definition of rape under IPC Section 375, “absence of consent of wife for unnatural act loses its importance. Marital rape has not been recognised so far.”

Justice Gural Singh Ahluwalia was hearing a petition by a man who prayed that an FIR filed by his wife accusing him of having unnatural sex with her be quashed. “This court is of the considered opinion that after having come to a conclusion that the act of unnatural sex by a husband with his legally wedded wife residing with him is not an offence under IPC Section 377,” said the order passed on May 1, quashing the FIR.

The couple got married in 2019. After accusing her in-laws of “physical and mental harassment for not fulfilling dowry demand”, she filed a case of cruelty and returned to her home.

She alleged that her husband had threatened her and revealed to her mother that he “had committed unnatural sex with her on multiple occasions”, following which she moved court to lodge an FIR against him.

“It is clear that a consensual sexual conduct between adults of the same sex cannot be termed as an offence under Section 377 of IPC. Thus in nutshell, it can be said if an unnatural sex takes place between two persons of same or different gender with the consent of both the parties, then it would not be an offence under IPC Section 377,” the court said.

The court said “consent of both the parties is necessary for taking the act out of the purview of IPC Section 377.”

“However, this court, after considering the amended definition of rape under IPC Section 375, has come to a conclusion that if a wife is residing with her husband during the subsistence of a valid marriage, then any sexual intercourse or sexual act by a man with his own wife not below the age of 15 years will not be rape,” the court said.

#### ACCORDING TO SC, IT IS ‘PREGNANT PERSONS’

In a sign of progressive intent, a three-judge Supreme Court (SC) bench, comprising Chief Justice D Y Chandrachud and Justices J B Pardiwala and Manoj Misra extended the ambit of pregnancy to include non-binary people and transgender men, among other gender identities, in addition to cisgender women. In its ruling in *A (Mother of X) v. State of Maharashtra*, involving the termination of pregnancy of a 14-year-old girl, the judges used the term “pregnant person/(s)” over 40 times, clarifying in a footnote that their reason for doing so was an acknowledgement of a wider, more inclusive gender spectrum. In a country where gender rights, including, especially, LGBTQIA+ rights, has had a chequered trajectory, this is a welcome, necessary step.

The SC’s nod comes as an expansion of its ongoing efforts to sensitise the legal fraternity — and by extension, the people of the land — to the nuances of neutral language. In August last year, launching its Handbook on Combating Gender Stereotypes, the Court had emphasised how impartiality is critical to the language of judicial discourse, capable of impacting procedural outcomes adversely, should it make room for paternalistic or prejudicial interpretations. In its introduction, the CJI wrote that the use of outdated language “inhibits the transformative project of the law and the Constitution of India, which seek to secure equal rights to all persons, irrespective of gender”. The current observation is rooted in that spirit.

In broadening categories of identity, this shift in language goes beyond semantics. It urges a reimagination of gender and intersectionality that is not limited to binaries and that recognises





the agency of individuals. For transgender men and non-binary people who choose to become pregnant, navigating healthcare and legal frameworks can be discriminatory and isolatory at the best of times. The Court's acknowledgement represents a vital step towards recognising legal protections for everyone capable of experiencing pregnancy. It is also in keeping with the language of its judgment on same-sex marriage last year in which it urged for legislative safeguards for same-sex couples. In lending institutional heft to the ongoing conversation around the use of gender-neutral language to reference matters of pregnancy, including abortion and fertility, the Court has set a precedent for legal systems and lower courts. While it takes time for change to take root — the legal battle for same-sex marriage, for instance, has been ongoing for decades — this could pave the way for a less conservative and more atypical understanding of gender and family.

## DO MARRIAGES NEED TO BE REGISTERED? WHAT HAPPENS IF THEY ARE NOT?

The Supreme Court last week ruled that despite an official marriage certificate, a Hindu couple before the Court had “never acquired the status of husband and wife.”

The reason: the couple's marriage was registered under the Hindu Marriage Act, 1955 (HMA) even before they performed the wedding rituals. The SC ruled that the couple who had filed divorce cases need not get a divorce because they were never married in the first place.

The apex court's observations in the ruling bring to focus various issues on registration and solemnization of a marriage, and its necessity.

### **What is a solemnized marriage?**

Solemnizing a marriage simply refers to the performance of an official marriage ceremony, with appropriate rituals.

Marriage in India is largely governed through a gamut of personal laws, and the Special Marriage Act, 1954 (SMA). Though codified through statute, these personal laws are essentially practices ordained by religion, with each religion having its own set of 'requirements' for a marriage — a marriage is 'valid' when these requirements are met.

For instance, for Hindus (and Christians), marriage is a sacrament, i.e. it is a religious bond. Rituals such as kanyadaan, panigrahana and saptapadi, or other local customs solemnize a Hindu marriage. Section 7 of the HMA codifies these requirements, and names saptapadi as an essential ritual.

For Christians, a ceremony in the Church based on local customs is regarded as a valid marriage. For example, for some Tamil Christians, this involves tying of a thaali — a chain with a cross on the pendant in Church.

Under Muslim law, however, marriage is essentially a contractual obligation. A valid marriage requires the consent of both parties, in writing, and in the presence of witnesses. In practice, this includes both parties giving vocal consent, and signing a nikahnama (Islamic marriage contract) in the presence of witnesses and a Qazi.

### **What are registered marriages?**

Registration of a marriage after it is solemnized as per rituals is different from a registered marriage.





Commonly used terms like ‘court marriage’ or ‘registered marriage’ refer to a non-religious or civil marriage under the SMA, a secular law. A marriage ‘performed’ under this law is essentially a solemnization in ‘court’ (a registrar’s office) without any rituals. However, marriages under personal laws (such as HMA) become ‘valid’ only after the performance of rituals prescribed by religion. A marriage without any rituals is only valid under the SMA.

Section 8 of the HMA gives powers to the state to register marriages solemnized as per the requirements of Section 7. Similarly, the Indian Christian Marriage Act 1872 provides the procedure for solemnization of Christian marriages and their registration.

For Muslims, a nikahnama issued by a Qazi outlines the terms of the marriage. Although not a public registration under a statute, this registration form is widely adopted. Separately, several states including Assam, and Jammu & Kashmir have their own laws for registration of Muslim marriages and divorce, although their application is scarce.

#### **What if a marriage is not registered?**

Entry 5 of the Concurrent List in the Constitution’s Seventh Schedule deals with marriage and divorce, and Entry 30 deals with vital statistics including registration of births and deaths. Both these subjects jointly or separately deal with the registration of marriages.

Although there is a central legislation on the subject — the Births, Deaths and Marriages Registration Act, 1886 — it does not have a robust application to marriage, unlike the effort to record births and deaths. States have their own laws, and in some states like Karnataka and Delhi, registration of a marriage is mandatory.

A certificate of a marriage registration is useful for various official purposes where either spouses need to declare that they are married. For instance, applying for a spousal visa or joint medical insurance. However, not registering a marriage cannot be the sole ground to declare it invalid — since registering a marriage itself does not make it valid, so not registering also cannot in itself make it invalid.

When the validity of a marriage is contested, then a marriage certificate alone is not enough to prove the marriage. An exception to this is a certificate under the SMA which is “conclusive” proof of marriage. Section 13(2) of the SMA states that “on a certificate being entered in the Marriage Certificate Book by the Marriage Officer, the Certificate shall be deemed to be conclusive evidence of the fact that a marriage under this Act has been solemnized and that all formalities respecting the signatures of witnesses have been complied with.”

In Muslim and Christian marriages too, registration takes place almost immediately after solemnization with witnesses present which makes it more reliable as evidence. This is unlike in a Hindu wedding where the priest performing the ceremony does not routinely certify the marriage.

However, in law, there exists a general presumption of marriage when a man and woman have cohabited continuously even if there is no direct evidence of marriage. Section 114 of the Indian Evidence Act states that “the Court may presume the existence of any fact which it thinks likely to have happened, regard being had to the common course of natural events, human conduct and public and private business, in their relation to the facts of the particular case.”

A ‘valid’ marriage as per rituals might be key in determining who is a rightful spouse when there are claims by multiple cohabiting partners. These aspects become crucial in bigamy trials,



inheritance suits. In a bigamy case, a man has to prove that one of his marriages is not valid to not be charged for marrying twice. In an inheritance case, the validity of a marriage is questioned to disinherit a spouse. Proof of performing a valid marriage as per rituals (through photos, witnesses etc.); proof of long cohabitation as spouses through acceptance by family, friends or even children is evidence of a valid marriage. A marriage certificate has corroborative value in these cases but cannot be counted as evidence in itself.

## SC VERDICT IN WEST BENGAL TEACHER RECRUITMENT CASE IS A MATTER OF REINFORCING TRUST IN PUBLIC JOBS

On Tuesday, a three-judge bench of the Supreme Court gave relief to the school teachers and non-teaching staff whose appointments were cancelled by a Calcutta High Court order of April. The HC's decision had cited irregularities in the West Bengal School Service Commission's procedures. The apex court's order does not exonerate the SSC. It rightly said that it would be unfair to set aside all the appointments because the tainted and untainted ones have not yet been segregated. In a stinging criticism of the SSC and the West Bengal government, the Chief Justice of India-led bench described their conduct as a "systemic fraud". The CBI will continue its investigation and the school staff appointed in breach of due procedures will have to refund the salaries. Meanwhile, the West Bengal government would do well to heed the SC's larger message: "Ultimately what happens is that today public jobs are so scarce and so valued, today, that if the faith of the community in public employment goes then nothing remains."

In 2014, the SSC announced a state-level selection test would be used to recruit teachers for West Bengal's state-run schools. The process which began two years later invited criticism and petitions were filed in the Calcutta High Court alleging that the mark sheets were not evaluated properly. The HC ordered an investigation by the CBI, which opened a can of worms. The SSC, reportedly, told the agency that it had destroyed the OMR answer sheets — answers to multiple choice questions in these sheets are scanned by computers, and not manually evaluated, making the process foolproof — after a year. The ED is conducting a separate investigation. The ongoing saga has also revealed the lack of transparency and accountability that dogs the SSC's recruitment process. Last month, a Calcutta HC bench constituted on the directions of the Supreme Court annulled the appointments.

The teacher recruitment issue is among the talking points in the campaign in West Bengal for the Lok Sabha elections. The BJP has alleged that numerous deserving candidates were denied jobs. West Bengal's ruling party, the TMC, has charged the BJP of mounting a drive to rob people of their jobs. It reveals the deficits of the state, where social and economic mobility often rests on getting a government job. According to the Unified Digital Information of School Education, West Bengal's government schools provide employment to more than 4,74,000 teachers. While the state government must course correct on teacher recruitment, it — and the Centre — must work closely to ameliorate the conditions that breed such scams.

## RESERVATION WITHIN CONSTITUTIONAL BOUNDS

### The story so far:

A political slugfest has emerged over the reservation issues with the BJP making outlandish remarks about the Congress' demand for caste census by linking it to religion. The Opposition, meanwhile, had raised concern over the BJP's position on reservation, despite the latter's explicit denial of any change in policy.

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### Constitution and affirmative action

The Constitution aims to secure social justice while guaranteeing equality as a fundamental right. Articles 15 and 16 guarantee equality to all citizens in any action by the state (including admissions to educational institutions) and public employment respectively. To achieve social justice, they also enable the state to make special provisions for the advancement of OBC, SC and ST. OBC is a collective term to classify socially and educationally backward castes. Many States also classify certain castes as the Most Backward Classes (MBC). The reservation percentages vary from State to State.

In the *Indra Sawhney case* (1992), the Supreme Court upheld the 27% reservation for OBC. It opined that caste is a determinant of class in the Indian context and backwardness cannot be determined solely on economic criteria. However, to uphold the basic structure of equality, it fixed a cap of 50% for reservations unless there were exceptional circumstances. The reservation of OBC (27%), SC (15%) and ST (7.5%) resulted in a total reservation of 49.5%. The court also provided for excluding the creamy layer from OBC with an income limit currently at ₹8 lakhs per annum. Children of parents, either of whom entered the government service (Centre or State) as Group A/Class I officers and children of parents, both of whom entered as Group B/Class II officers are also excluded. In the *Janhit Abhiyan case* (2022), the court by a majority of 3:2 upheld the constitutional validity of the EWS reservation. It held that economic criteria could be a basis for reservation.

### Affirmative action elsewhere

In the U.S., there is 'affirmative action' that consists of government-approved and voluntary private programs granting special consideration to racial minorities like African-American and Latin-American. In *Fair admissions vs Harvard case* (2023), the U.S. Supreme Court, however, ruled that race-based affirmative action programs in college admissions violate the equal protection clause of the U.S. Constitution. In the U.K., the law enables voluntary 'positive action' which allows employers to combat under-representation of disadvantaged groups. France does not have any affirmative action based on race or ethnicity. It provides educational measures designed to increase opportunities for low-income students.

### Current debate

The Constituent assembly that framed our Constitution was against reservation solely based on religion. The Constitution guarantees the prohibition of discrimination only based on religion under Articles 15 and 16. The inclusion of all Muslim communities within the OBC quota in Karnataka forms the basis for the BJP's campaign at present. However, it is pertinent to note that sub-categorisation for Muslims within the OBC quota has been present in Karnataka since 1995. The four per cent sub-categorisation for Muslims introduced in 1995 by the H. D. Deve Gowda-led government was removed by the previous government led by Basavaraj Bommai. This was redistributed amongst the OBC in the Hindu community. However, after observation by the court in the case challenging this order, the *status quo* continues. Muslim and Christian communities who are socially and educationally backward are provided reservations under the OBC/MBC category. There is also sub-categorisation within the OBC/MBC quota for Muslim communities in States like Kerala, Tamil Nadu and Andhra Pradesh. This is because the term used in the Constitution is 'socially and educationally backward classes' and could encompass backward communities from all religions. It is only for being a member of a SC, 'The Constitution (Scheduled



Castes) order, 1950' specifies that the person should profess only Hinduism, Sikhism or Buddhism. There is no such requirement for being a member of a ST.

The Congress, meanwhile, in its manifesto has promised that they would work towards removing the 50% cap placed on reservations.

### The way forward

Reservation is affirmative action meant to balance the historical discrimination faced by OBC, SC and ST communities. Rohini Commission was set up to provide recommendations on sub-categorisation amongst OBC castes. Though the findings of the report are yet to be made public, it has been estimated that 97% of reserved jobs and seats in educational institutions have been garnered by just around 25% of the OBC castes/sub-castes at the central level. Close to 1,000 of around 2,600 communities under the OBC category had zero representation in jobs and educational institutes. While sub-categorisation has been implemented in 11 different States, it has not been carried out at the central level. A similar issue of concentration of reservation benefits persists in the SC and ST categories. There is no exclusion based on the 'creamy layer' for these communities. The Dalit Christians and Muslims also suffer from considerable discrimination and lack of opportunities. The government has constituted a commission headed by former CJI K. G. Balakrishnan to study the question of extending SC reservation to Dalits who have converted to religions other than Sikhism and Buddhism.

Increasing the reservation limit beyond 50%, sub-categorisation among reserved categories, introducing appropriate creamy layers for SC and ST, and extending SC reservations to Dalit Christians and Muslims are matters that are sensitive with their set of pros and cons. There must be effort nevertheless to deliberate on these matters and frame suitable policies such that the benefits of reservation progressively reach the extremely marginalised sections. The aim should be towards the continuous pursuit of social justice while maintaining a harmonious balance with equality guaranteed in the Constitution.

## HINDU POPULATION SHARE DIPPED 7.82%, WHILE THAT OF CHRISTIANS, MUSLIMS, SIKHS ROSE: PM-EAC

The share of Hindu population in India has dipped 7.82 per cent while that of Muslims, Christians and Sikhs has seen a rise in the 65-year period between 1950 and 2015, a new analysis by Economic Advisory Council to the Prime Minister (PM-EAC) has shown, suggesting a 'conducive environment' for increasing diversity.

— The PM-EAC report titled 'Share of Religious Minorities: A cross country analysis' studied data on religious composition of populations for 167 countries. The dipping majority population and rising minority population in India was in line with global trends, also seen in Europe, but stood out in relation to India's neighbours.

— While the population of Hindus declined 7.82 percent, the share of the Muslim population rose from 9.84 percent to 14.09 percent. The share of Christian population rose from 2.24 percent to 2.36 percent, the share of Sikh population increased from 1.24 percent to 1.85 percent and the share of the Buddhist population rose from 0.05 percent to 0.81 percent.

— The Jain and Parsi community population witnessed a dip. The share of Jains declined from 0.45 percent to 0.36 percent and the share of the Parsi population declined 85 percent from 0.03 percent to 0.0004 percent.





— According to Shamika Ravi, member of the PM-EAC, the Indian experience is similar to most of world's high-income and liberal democracies, such as OECD countries which have seen a major decline in the share of majority religion.

— It said the total fertility rate (TFR) among all religious groups was declining and the highest decrease in TFR from 2005-06 to 2019-21 was observed among Muslims, a 1 percentage point drop in their TFR. Hindus saw a 0.7 percentage point drop.

#### SHOULD ALL THE PARLIAMENT SECURITY BE WITH CISF? PANEL WILL EXAMINE

Security at the Parliament complex could witness a radical overhaul with the Union Home Ministry constituting a panel to assess whether personnel of the CISF (Central Industrial Security Force) should take charge of the entire process — right from managing security arrangements to issuing passes to regulating movement of MPs, VIPs, officials and the media, The Indian Express has learnt.

— Last month, the CISF was brought in to replace 150 personnel of the Delhi Police, who used to be deployed alongside the Parliament Security Service.

— Former Lok Sabha Secretary General said: "Parliament security is a part of the Lok Sabha Secretariat and its job is to protect the interest of MPs and facilitate things for them. This cannot be performed by any outside security agency. Parliament security service consists of well-trained personnel who cannot be replaced by a security agency that has no experience in dealing with Members of Parliament."

— "It is under the control of the Speaker and if at all there's a need to change the composition of the parliamentary security system, it has to be done under the direction of the Speaker, not by the MHA. It cannot be performed by any ministry."

#### For Your Information:

— The Parliament Security Service came into existence with the formation of the Watch and Ward Committee on September 3, 1929, an initiative taken by Vithalbai Patel, then president of the Central Legislative Assembly. This followed a bomb throwing incident in the Lok Sabha chamber in April 1929 by Bhagat Singh and Batukeshwar Dutt.

— The committee works independently under the Lok Sabha Speaker. While a joint secretary (security) looks after the entire Parliament House complex, the director (security) of the Rajya Sabha Secretariat has operational control over the Upper House, and the director of the Lok Sabha Secretariat over the Lower House.

— Currently, the Parliament Security Service is "solely responsible for the management of access control and regulation of people, material and vehicles within the historical and prestigious Parliament House complex".

— Article 98 of the Constitution also mandates each House to have a separate secretariat staff.

#### VOTING FOR RELIEF

In granting interim bail to Delhi Chief Minister Arvind Kejriwal, the Supreme Court of India has reversed a development that upset the level playing field for the ongoing general election. When





Mr. Kejriwal was arrested in March for his alleged involvement in corruption in the formulation of a liquor policy for Delhi, it might not have seemed an obvious setback to federalism and democracy. But the arrest of a serving Chief Minister and a key figure in the Opposition, when the election process was already on, sent shock waves among regional parties. And, as he remained behind bars, it stoked fears that States run by parties other than those in power at the Centre could easily be undermined by getting central agencies to arrest Chief Ministers on charges that may or may not be based on evidence. In Mr. Kejriwal's case, the Court is right in both citing the general election as a good enough reason to grant him interim bail until June 1, when the last phase of polling will be held, and in rejecting the Centre's argument that it would amount to favourable treatment to politicians. As the Court has pointed out, interim release orders relate to the "peculiarities associated with the person in question and surrounding circumstances". The absence of a notable leader from the campaign arena, especially when he is yet to be convicted, will be a factor that will cast a doubt on the free and fair nature of the election.

The Court has made his bail conditional on his keeping away from the Delhi Secretariat and the CM's office. And he is to abide by his statement that he would not sign any official file, unless required to do so to get the Lieutenant General's approval for something. That Mr. Kejriwal did not respond to several summonses from the Enforcement Directorate (ED) does not show him in a good light. But, at the same time, it cannot be forgotten that be it the CBI's corruption charge, or the ED's money-laundering charge, the case against him is based on a belated statement made by suspects who had turned approvers and obtained pardon on the promise of testifying against him. The probative value of these statements will be tested during trial. Another factor to be noted is that there are statutory restrictions under the Prevention of Money Laundering Act on seeking bail, resulting in many questioning the validity of their arrest, as Mr. Kejriwal has done, rather than file for bail. If only courts applied the basic principle of granting bail to those who are unlikely to flee from justice, with appropriate conditions to neutralise their likely influence over witnesses and to safeguard evidence, orders granting bail would not evoke political reactions and doubts whether the political class is being unduly favoured.

## HOW IS KEJRIWAL FUNCTIONING FROM TIHAR JAIL?

### The story so far:

Delhi Chief Minister Arvind Kejriwal has been lodged in Tihar Jail since April 1 after being arrested by the Enforcement Directorate (ED) on charges of corruption and money laundering in the execution of the Delhi government's now scrapped excise policy for 2021-22. On Friday, the Supreme Court forewarned the ED that it may "consider" granting interim bail to Mr. Kejriwal due to the Lok Sabha election. Delhi votes on May 25.

### What is the Aam Aadmi Party's strategy?

Foreseeing his arrest, the Aam Aadmi Party in December, 2023 ran a "Main Bhhi Kejriwal" (I am also Kejriwal) campaign that asked the people of Delhi if Mr. Kejriwal should continue as the Chief Minister of Delhi from jail if arrested. After his arrest, in an unprecedented decision, AAP decided that Mr. Kejriwal would remain the Chief Minister and that he would run the government from behind bars proclaiming it as the "will of the people of Delhi".

Mr. Kejriwal's decision has led to a peculiar situation in the capital where various administrative decisions have been stalled. For instance, the election to appoint the Mayor and Deputy Mayor of the Municipal Corporation of Delhi (MCD) scheduled to be held on April 26 was postponed after



Lieutenant-Governor Vinai Kumar Saxena refused to appoint a presiding officer to conduct the election saying he “did not deem it appropriate to exercise his power as Administrator to appoint the Presiding Officer in [the] absence of inputs from the Chief Minister.”

#### **Is the Chief Minister meeting his Ministers?**

When Mr. Kejriwal was in the custody of the ED from March 21 to April 1, he was sending written instructions to his Ministers on ensuring uninterrupted water supply and medicine as well as messages to the public to be read out by his wife Sunita Kejriwal.

However, since being lodged in Tihar Jail, communication has been reduced to media bites from those going to visit him. The Tihar Jail Manual says that every interview with a prisoner shall take place in the presence of a prison officer, who shall be positioned at a place from where he can see and hear what passes between the prisoner and his interviewer and he shall prevent any article being passed between the two parties. Since April 1, apart from his family and lawyers, Mr. Kejriwal has met AAP general secretary Sandeep Pathak and Cabinet Ministers Atishi and Saurabh Bharadwaj once and his Punjab counterpart Bhagwant Mann on two occasions. Mr. Pathak said Mr. Kejriwal would meet two Cabinet Ministers every week for 30 minutes each.

#### **How is the government being run?**

Mr. Kejriwal does not have any portfolios under him and there have been no cabinet meetings since his arrest. There has also not been a session of the Delhi Assembly since then. Individual ministers have been looking after their own departments. The party is currently focused on its election campaign. While deferring the MCD elections, the LG said that the circumstances were “peculiar” and “unprecedented” where the serving Chief Minister “cannot discharge his constitutionally obligated functions.”

The Constitution is silent about whether a person can continue as Chief Minister as remand prisoner. Section 8(3) of the Representation of People Act of 1951, states that an MLA or MP can be disqualified when convicted and sentenced to at least two years in prison. Mr. Kejriwal has not yet been convicted in the case.

#### **When can President’s Rule be imposed?**

President’s Rule can be imposed in Delhi under Article 239AB of the Constitution. Delhi’s power structure is characterised by a delicate balance between the elected government and the Central government-appointed LG. If Mr. Kejriwal continues to remain in prison, stalling various administrative work, the LG can recommend to the President who can invoke Article 239AB citing “failure of constitutional machinery”. President’s rule under Article 239AB was invoked in Delhi only once, in 2014, subsequent to Mr. Kejriwal’s resignation 49 days into his first tenure as Chief Minister.

#### **What are the challenges going forward?**

In a recent order, the High Court censured the AAP government over non-supply of educational material and other statutory benefits to eight lakh students in the MCD-run schools. While noting that it is Mr. Kejriwal’s prerogative whether to continue as the Chief Minister or resign, the High Court said national and public interest demands that no person who holds this post is incommunicado or absent for a long stretch of time or for an uncertain period time.



## 1980 LOK SABHA ELECTIONS: TRIUMPH AND TRAGEDY OF INDIRA GANDHI

Indira Gandhi's defeat and the coming to power of Janata after 21 months of the Emergency brought hope to the country. Prime Minister Morarji Desai's cabinet was full of stalwarts — Charan Singh (Home), Jagjivan Ram (Defence), Atal Bihari Vajpayee (External Affairs), Madhu Dandavate (Railways), L K Advani (Information & Broadcasting), George Fernandes (Industry), Biju Patnaik (Steel), Shanti Bhushan (Law), Mohan Dharia (Commerce) and Raj Narain (Health). However, the Janata Party failed to hold on to power.

### **Morarji's 16 months**

On April 30, 1977, about a month after taking oath, Desai, in a style typical of Indira's, dismissed all nine Congress-ruled state governments. In December 1978, Indira — who had won a byelection and returned to Parliament in the previous month — was arrested for a week after Lok Sabha voted in its favour, and also expelled her for breach of privilege and contempt of the House.

Even as the Congress rapidly regained public sympathy, the contradictions within Janata, an amalgam created only to defeat Indira, intensified. Charan Singh walked out for a second time, bringing down the government's strength in Lok Sabha to 246 from 298. On July 10, 1979, Leader of Opposition Y B Chavan moved a motion of no-confidence, forcing Desai to resign on July 15.

President Neelam Sanjiva Reddy called on Chavan to form the new government, but he declined. So, Charan Singh, with his faction of Janata called Janata Party (Secular), took oath as Prime Minister on July 28. He was dependent for survival on two factions of the Congress — Devaraj Urs' Congress (U), which joined the government, and Indira's Congress (I), supporting from outside.

### **Hurtling to elections**

Urs, who was then Chief Minister of Karnataka, had split from Indira's Congress in July 1979, protesting against the control that her son Sanjay exercised on the affairs of the party. Urs and K Brahmananda Reddy, a former Chief Minister of Andhra Pradesh who was then president of the Congress, positioned themselves against Indira and Sanjay. They were joined in the Congress (U) by Congress leaders including Sharad Pawar, A K Antony, C Subramanyan, and Karan Singh.

Y B Chavan became Deputy Prime Minister and Home Minister in Charan Singh's government, and Karan Singh was appointed Minister of Education and Culture.

The Prime Minister was asked to prove his majority on August 20, 1979. On the morning of the vote, the Congress (I) withdrew support to Charan Singh. The tallest farmer and Jat leader of the country could not last even a month as Prime Minister. Based on his advice to the President, Lok Sabha was dissolved on August 22, 1979.

Following the dissolution of Lok Sabha, a faction of the Janata Party led by Raj Narain claimed before the Election Commission of India that it was the "real" Janata. However, its claim was rejected, and in September 1979, Charan Singh's Janata Party (S) was recognised as a national party and allotted a new symbol, that of 'Farmer Ploughing a Field'. In September, the party was renamed as Lok Dal.

### **The return of Indira**

Votes were cast on January 3 and January 6, 1980 — the first time that elections were held in peak winter. For the first time, two or three observers were appointed in each Lok Sabha constituency

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



— a practice that was begun during the Assembly elections of 1978, breaking from the earlier system of appointing observers at only a few sensitive constituencies. For the first time, votes were cast in a particular booth — Bilona in Harlakhi Assembly constituency in Bihar — thrice due to malpractices.

A total 36.39 crore voters, including more than 17 crore women, voted for 543 seats, 79 of which were reserved for Scheduled Castes (SCs) and 40 for Scheduled Tribes (STs). In the fray were 4,634 candidates, including 142 women.

Results were declared early on January 9, 1980. Indira's Congress (I) swept to 353 seats, marking a triumphant return with almost two-thirds majority. Charan Singh's group won 41 seats, and Chandra Shekhar's Janata 31. The CPI(M) won 37, and CPI 10. The Congress (U) won just 13 seats.

Indira won from Rae Bareilly in UP and Medak in Andhra Pradesh (now Telangana), and retained Medak. Sanjay won from Amethi, Kamal Nath from Chhindwara, Shankar Dayal Sharma (who would be President) from Bhopal, V P Singh (who would be Prime Minister) from Allahabad, and Zail Singh (another future President) from Hoshiarpur.

Chandra Shekhar retained Ballia, the seat from where he was elected in 1977 for the first time. Fernandes won from Muzaffarpur in Bihar and Devi Lal from Sonapat in Haryana on Janata Party (S) tickets.

#### **Janata's split, BJP's birth**

Following the election debacle, on February 25, 1980, Jagjivan Ram wrote to Chandra Shekhar to discuss the issue of "dual membership" of leaders who had come to Janata from the Bharatiya Jana Sangh (BJS), but remained members of the Rashtriya Swayamsevak Sangh (RSS).

In his autobiography, Advani, who was one of these "dual" members, wrote that he responded that BJS members in Janata "were being treated like Harijans (political untouchables)". On April 6, 1980, a faction of leaders from the erstwhile BJS elected Vajpayee as their president, and staked claim to the Janata Party symbol.

On April 24, 1980, the Election Commission froze the 'Farmer Holding a Plough Inside a Circle' symbol, and granted the Vajpayee faction the status of a national party. This faction of Janata now became the Bharatiya Janata Party (BJP), with a new election symbol — the 'Lotus'. Chandra Shekhar's faction was allowed to retain the name Janata Party (JP), but was given a new symbol, the 'Umbrella'.

#### **Indira's tragedy**

Back in power, Indira dismissed nine non-Congress state governments, and dissolved those Assemblies. Polls in these states were held in May-June 1980, and the Congress came to power in most.

On June 23, 1980, Sanjay, Indira's 33-year-old political heir, was killed in a plane crash at Delhi's Safdarjung Airport. Indira was in mourning — but the years to come would bring her more difficulties. Sanjay was replaced in Amethi by his older brother, the "reluctant" politician Rajiv Gandhi.

The separatist movement in Punjab was Indira's biggest challenge. To flush out Jarnail Singh Bhindranwale from the Golden Temple, the government launched Operation Blue Star on June 1,





1984. On June 3, a 36-hour curfew was imposed in Punjab, which included the suspension of all communication, public travel and electricity, and complete media censorship. The Indian Army killed Bhindranwale, but the holiest shrine of the Sikhs was heavily damaged, and the operation left very deep scars.

On October 31, 1984, Indira was assassinated by two of her Sikh bodyguards, triggering mass attacks on innocent members of the community. Rajiv, 40, stepped into his mother's shoes as Prime Minister.

#### WHAT ELECTION COMMISSION TOLD MALLIKARJUN KHARGE ON REVISED VOTER TURNOUTS, HOW FIGURES ARE ARRIVED AT

The Election Commission of India (ECI) on Friday (May 10) strongly refuted allegations by Congress president Mallikarjun Kharge — made in a letter to INDIA allies on May 6 — that the “delay” in the release of final voter turnouts indicated an “attempt to doctor the final results”.

Kharge had asked why the first-phase turnout increased by 5.5 percentage points and the second-phase turnout by 5.74 percentage points between the close of polling and April 30, when the final voting figures for both these phases were released.

#### **What were the initial and final turnout figures in the first two phases of polling?**

In an official release issued at 7.55 pm on April 19, the ECI said turnout in the constituencies where votes were cast in the first phase was “over 60% at 7pm”. The release said the final figure was likely to be higher after reports came in from polling stations where voting continued beyond the scheduled cut-off of 6 pm to allow voters who had already entered the stations to vote.

A day later, most reports, including those in The Indian Express, said turnout was 65.5%, attributing it to senior officials in the ECI.

On April 26, when votes were cast in the second phase, the ECI press release, issued at 9 pm, put the turnout at 60.96% at 7 pm. News organisations subsequently reported a more-or-less final figure of 66.71%, based on unofficial confirmation from senior ECI officers.

On April 30, the ECI released the final figures for both phases through an official release, which put the phase 1 turnout at 66.14% and the phase 2 turnout at 66.71%.

After voting in the third phase on May 7, the ECI first released an estimated turnout of 61.45% at 8 pm, and then revised it some time before midnight to 64.4% for 11.40 pm. The day after, this turnout figure was updated to 67.33%. In its first press release on May 7 evening, the ECI said it would release the final turnout data by May 11.

#### **Why is there a difference between initial and final voter turnout numbers?**

According to the ECI, the initial number is a preliminary estimate, which changes. ECI officials say the higher final figure does not mean that votes were cast even after polls closed — it could be simply due to the fact that the Returning Officers (ROs) sent in the updated data late.

According to the ECI officials, even the data released on April 30 is not final — that figure will be known only after postal ballots are counted on the day of counting (June 4) and added to the turnout.





On both April 19 and April 26, state- and constituency-wise turnouts were available in real time on the ECI's Voter Turnout mobile application. This app — which was launched by the ECI after the second phase of polling in 2019 — carries this disclaimer: “This is an approximate trend, as data from some Polling Stations (PS) takes time and this trend does not include data of postal ballot voting. Final data for each PS is shared in Form 17C with all Polling Agents.”

Form 17C is made available to all candidates through their polling agents at the close of polling. Form 17C includes the total numbers of electors and voters at the seat. This information is not available on the Voter Turnout app. (More on Form 17C below)

**Were the official turnout figures — released 11 days and 4 days after phases 1 and 2 of the voting respectively — unusually delayed?**

No, says the ECI. In its response to Kharge, the ECI provided details of the release of official turnout data for the 2019 Lok Sabha election and state Assembly elections over the past few years. This data, it said, “would testify there is no unusual delay than what is required to collect data from large number of polling stations”. The data provided by the ECI showed a 1-3 percentage point increase in the turnouts in the 5-7 days it took to release the phase-wise turnouts in 2019.

ECI officials say it takes time to verify and collate the data, particularly from remote polling stations. In some cases, polling parties have to make it back from these remote locations to the district headquarters, where they have a stable Internet connection to transmit the data.

In its letter to Kharge, the ECI said that after the polling parties arrive, documents are scrutinised by the Returning Officers in the presence of candidates and observers. The RO then completes data entry, and publishes the data on the Voter Turnout app.

“This process takes P+1 (polling day plus 1) or P+2 (polling day plus 2) days depending on constituencies and arrival schedule of polling parties due to geographical and weather conditions. This data may further get updated for any constituency where repoll is being conducted, on conclusion of repoll and arrival of parties which is normally on P+4 days,” it said.

**And what is Form 17C? To whom is it issued, and when?**

As per the Conduct of Elections Rules, 1961, there are two forms that have data on the number of electors and voters — Forms 17A and 17C.

The former is a register of voters, in which polling officials record the details of every voter who comes into the booth and signs the register. The latter is the account of the votes recorded.

Form 17C is issued to the polling agents of candidates at the close of polling.

It has the identification numbers of the EVMs used in the polling station; the total number of electors assigned to the polling station; the total number of voters as entered in the register for voters (Form 17A); the number of voters who decided not to record their votes after signing the register; the number of voters who were not allowed to vote; and the total number of test votes to be deducted, and total number of votes recorded per EVM.

Part-II of the same form carries the results of the counting, which are entered on counting day.



The data in Form 17C are considered final, and lie at the heart of any Election Petition that may be filed challenging the result. In a statement issued on April 30, the ECI said the “actual data of Form 17C shall prevail which is already shared with candidates”.

Apart from being the record that is to be used in a possible legal challenge, the data in Form 17C are also used by candidates to verify the results on counting day. The number of electors and those who cast their votes as recorded in Form 17C can be matched with the EVM count.

#### **Why is there a demand to make the Form 17C data public?**

Activists have sought to make a case for full transparency. Also, they say, even if Form 17C is made available to the candidates’ agents, given the large numbers of polling stations at each constituency, difficulties of coordination, and shortage of resources, many candidates find it impossible to collate all the figures for the constituency as a whole.

The ECI has said that it is not “legally bound to publish any voter turnout data at aggregate level”. It has sought to allay concerns by reiterating that the provision of Form 17C is a statutory requirement, and no candidate or party has alleged that they have not received the form at the close of polling.

Also, on the day of counting, the counting supervisor must certify in Part-II of the form that there is no discrepancy in the votes counted and the votes recorded in Part-I on polling day. This is countersigned by all candidates or their representatives, and discrepancies, if any, can be challenged, the ECI says.

### **ECI’S LETTER ON DEEPFAKES: WHAT POLL PANEL HAS SAID, AND WHAT REMAINS UNCLEAR**

In its first formal response to the use of deepfakes in this election season, the Election Commission of India (ECI) has directed political parties to not share such content on social media and, if they come to know of such content, to take it down within three hours, and “warn” the person in the party who had shared it.

“...The scale of spread of such misinformation has been observed to be dangerously unrestrained due to the availability of the option of “forwarding/ re-sharing/ re-posting/ re-tweeting”...,” the ECI wrote to all recognised parties on Monday (May 6).

The BJP, Congress, DMK, AIADMK, and accounts affiliated to these parties have shared deepfakes, or content created by using artificial intelligence (AI), during the ongoing elections.

A BJP delegation comprising Union IT Minister Ashwini Vaishnaw, spokesperson Anil Baluni, and senior leader Om Pathak had brought to the ECI’s notice alleged deepfake videos of Home Minister Amit Shah and actors Aamir Khan and Ranveer Singh that were used to peddle fake narratives.

Importantly, the ECI has not discouraged parties from using AI to create campaign material, but has only asked them to refrain from sharing content which is “misinformation or information which is patently false, untrue or misleading in nature and those that impersonate another person”.

Here is what the ECI has said, and the questions that it has left unanswered.



### What the ECI has said

**FLAGGING EROSION OF TRUST:** The ECI said the use of “manipulated, distorted, edited content on social media platforms has the potential to wrongfully sway voter opinions, deepen societal divisions, and erode trust in electioneering process by attacking laid out instrumentalities of the electoral steps in terms of means and material”.

**PROTECTION OF WOMEN:** The ECI asked parties to not share on social media content that included impersonation of another person, including political parties or their representatives, and to not post or promote content that was derogatory to women or “repugnant to the honour and dignity of women”.

**REPORTING OF FAKES:** Parties have been asked to report unlawful information and fake user accounts that look like their official handles on social media platforms.

**GRIEVANCES COMMITTEE:** In case of “continued presence of such unlawful information or fake user account after reporting to social media platform”, parties have been asked to approach the Grievance Appellate Committee (GAC) under Rule 3A of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021. The IT Ministry had formed three GACs last year for users who were not satisfied by action taken by social media platforms on their reported content to seek redressal.

**THREE-HOUR DEADLINE:** The ECI has directed that “whenever such deepfake audios/ videos come to the notice of political parties, they shall immediately take down the post but maximum within a period of 3 hours and also identify and warn the responsible person within the party”.

### What remains unclear

**REAL OUTCOMES:** The ECI has chosen to react after two phases of the election are already over — whereas deepfakes have been shared by parties from long before that. Also, what real impact the ECI’s letter has in curbing the menace remains to be seen.

**UNCERTAIN LANGUAGE:** It is unclear what the Commission means by saying that parties should take down deepfakes when it comes to their “notice”, when it is the parties’ official handles themselves that are sharing the content. Also, the advice to “warn” the person responsible for sharing such content is vague and appears to be lacking teeth, besides suggesting the existence of free agents within parties with access to official handles.

**WHAT ABOUT WHATSAPP?** The ECI’s letter covers content shared on social media platforms such as Facebook, X, and Instagram, but it is unclear what is being done about deepfake-led disinformation being circulated on secure messaging platforms like WhatsApp.

The encryption security of such platforms prevents anyone from knowing the texts, images, and videos being shared, which makes it difficult to assess the total quantum of misinformation/ disinformation. WhatsApp is used by more than 500 million users in India, and is perhaps the most effective way to spread misinformation/ disinformation.

**DIRECT AI-BASED CALLS:** Parties have been using AI-based real-time calls to voters, The Indian Express has reported earlier. These calls happen outside the purview of social media platforms, but can be potentially weaponised by parties or candidates. The ECI’s letter does not deal with this aspect.



## UNVEILING THE VEIL: EXPENDITURE DISPARITIES IN INDIA'S ELECTORAL SYSTEM

In the colourful mosaic of Indian democracy lies a fundamental question that strikes at the core of our democratic ethos: the issue of electoral expenditure. In the 2019 general elections alone, the Bharatiya Janata Party (BJP) and the Congress collectively spent an astronomical sum of over ₹20 billion. While the Representation of the People Act, 1951 (RPA) meticulously outlines expenditure limits for individual candidates, a glaring gap remains — the absence of comparable restrictions on political party spending and third-party spenders/campaigners. This discrepancy has not only opened the floodgates for unchecked expenditure by parties but has also paved the way for a skewed electoral landscape, where financial muscle trumps meritocracy.

The researchers of CSDS-Lokniti analysed the expenditure reports submitted by various political parties during the Karnataka and Tripura State Assembly elections in 2023. In Karnataka, the study scrutinised the spending of three national parties, the BJP, the Congress, and the Aam Aadmi Party (AAP), alongside three State parties which are the Janata Dal (Secular) (JD(S)), the Samajwadi Party (SP), and the Communist Party of India (CPI). Similarly, in Tripura, the study examined the expenditure reports of three national-level parties, the BJP, the Congress and the Communist Party of India-Marxist (CPI-M), and three State parties, the All India Trinamool Congress (AITC), the Communist Party of India (CPI), and the Revolutionary Socialist Party (RSP).

The States for this study were selected based on the availability of expenditure reports for the 2023 Assembly elections, released by the Election Commission (EC). Furthermore, national and State parties that had incurred the highest expenditure in a State were chosen, provided they had released their segregated expenditure reports. The study, thus, highlights the significance of regulating expenditure across all key stakeholders to ensure a level playing field in the electoral arena.

### **Party expenditure during elections**

Expenditure limits are vital for ensuring fair elections and preventing a financial arms race. According to International IDEA, 65 countries around the world, including the U.S., the U.K., Canada, and Brazil, have a cap on election expenditure of political parties. This framework serves as a stark contrast to the scenario in India, where the absence of such caps has led to a lopsided expenditure landscape. In Karnataka, for example, the combined spending of the two national parties, the Congress and BJP, has surged to over 500% higher than that of the two State parties, JD(U) and SP combined. Similarly, in Tripura, national parties outspend their regional counterparts by over 200%.

This glaring discrepancy underscores the impact of the absence of spending caps, effectively skewing the playing field in favour of deep-pocketed political giants. The exorbitant sums poured into campaigns tilts the scale of competition, disadvantaging independent or less financially endowed candidates.

Both national and State-level parties allocated a significant portion of their “general party propaganda” budget to media advertisements, surpassing expenses for rallies and other activities. This observation underscores the pressing need for reforms to ensure fair access to media platforms.

The stark contrast in media advertising expenditure leads one to examine the role of digital platforms like Google and Meta (formerly Facebook) in the ongoing Lok Sabha elections. Big





spenders, primarily national parties, are allocating disproportionately higher budgets to ads on these digital platforms. This was highlighted in a recent study of the CSDS-Lokniti (*The Hindu* dated April 18, 2024). In contrast, State parties were found to have a negligible presence in terms of advertisements on these platforms through their official party handles. This observation again highlights the need to regulate the overall spending of political parties ensuring that political actors compete based on the strength of their ideas rather than the depth of their pockets.

### **Role of third-party campaigners**

Third-party or non-party campaigners refer to individuals or groups participating in campaign activities during elections, without being formally registered as political parties or candidates. However, in the Indian electoral laws, the term hasn't been clearly defined. While the issue of regulating the expenditure of political parties is widely discussed and debated, regulation of third-party involvement is often overlooked. The unchecked expenditure and the nature of content posted by third-party campaigners raises serious issues around the lack of transparency and accountability of such actors. Now that the electoral bond scheme is scrapped, the lack of regulation of third-party expenditure during elections could result in a rise of quid pro quo arrangements and could also lead to an influx of unaccounted money into the electoral process.

Through our study, we found several third-party campaigners on Google and Meta platforms spending substantial sums of money to influence voters for or against a political party.

### **What can be done?**

In alignment with global practices, the EC's 'Proposed Electoral Reforms' report in 2016, advocated for the introduction of expenditure ceilings for political parties in India. However, garnering unanimous support for this proposal proved challenging, highlighting resistance from certain political factions.

Similarly, embracing strategies from countries like Australia and the U.K. could offer valuable insights and present tangible models worth considering for India regarding the regulation of third-party involvement. While the former requires formal registration and disclosure requirements for third parties, the U.K. imposes differentiated limits on targeted spending, spending in each constituency, and spending on U.K.-wide campaigns at certain elections. This is also essential for increasing transparency and accountability, curbing the unregulated flow of money, preventing quid pro quo arrangements, and checking the influx of black money into the electoral process.

Reassessing India's political funding framework is imperative to ensure the integrity and transparency of elections. Introducing expenditure ceilings for political parties represents a crucial step towards upholding these fundamental principles.

By embracing these measures, India can aspire to international standards of electoral integrity, instilling greater confidence and trust among its citizens in the democratic process.

## **YEARNING FOR CHANGE**

Jammu and Kashmir, and Ladakh, the Union Territories bifurcated from the legacy border State of J&K, are among the few States/UTs where polling is taking place across many phases. The constituencies in Jammu have already voted in the first and second phases while elections have been postponed from the third to the sixth phase in the Anantnag-Rajouri constituency. While the





turnout in Udhampur (68.27%) and Jammu (72.22%) were encouraging and more or less in line with the participation figures of 2019, it would be an achievement for Indian democracy if voters turned out in good numbers in constituencies in the Kashmir Valley. The turnout figures for Srinagar (14.43%), Anantnag (8.49%) and Baramulla (34.6%) were among the lowest in the country. This was largely due to a sense of disillusionment among the electorate over the dissolution of the erstwhile State's Assembly. Since 2019, the Valley has been subject to persistent central rule that has led to phases of severe repression followed by attempts to rejig its polity and electoral map. The abrogation of special status for the erstwhile State and the continuance of J&K as a UT have not helped reverse the alienation. But the polls could provide a platform for the disenfranchised electorate to air their grievances in the form of a decisive mandate.

The enduring distrust between the Kashmiri polity and New Delhi also explains why the traditional parties in the former have sought to oppose the postponement of the polls in the Anantnag-Rajouri seat, ostensibly due to weather conditions. But the mainstream Kashmiri polity including the Peoples Democratic Party (PDP) and the Jammu and Kashmir National Conference (NC) that came together with others to form the People's Alliance for Gupkar Declaration could not unite and contest as one in the Lok Sabha elections. The NC and PDP have revived their political hostilities in the Valley; the former is in alliance with the Congress as part of the INDIA bloc. As for the Bharatiya Janata Party, its triumphal talk of "unifying" the country by abrogating J&K's special status sounds hollow: it has limited its contest to the Hindu-majority Jammu and Buddhist-majority Ladakh. In Ladakh, the campaign led by activist Sonam Wangchuk has brought the question of Statehood and environmental concerns to the fore. But that has not been enough to rev up the Opposition. The Congress and NC could not come up with a consensus candidate for the Ladakh constituency that includes the Leh and Kargil areas, leading to the Congress fielding a candidate from Leh, while the Kargil units of both parties are supporting an independent from that area.

## THE DELAY IN NAGALAND CIVIC BODY POLLS

### The story so far:

On April 30, Nagaland's State Election Commissioner T.J. Longkumer notified the schedule of elections to the State's Urban Local Bodies (ULBs) across three municipal councils — Dimapur, Kohima, and Mokokchung — and 36 town councils. The notification came four days after the Neiphiu Rio-led State Cabinet paved the way for holding civic polls stalled for 20 years because of opposition to the reservation of 33% of the wards reserved for women. The ULB polls are scheduled on June 26.

### Why are civic polls in focus?

Until the recent notification, Nagaland has been the only State where 33% of the seats or wards in the ULBs have not been reserved for women as mandated by clause IV of the 74th Amendment to the Constitution of India because of opposition from the Naga hohos (traditional apex tribal bodies) who argued that such a quota would violate the special provisions granted by Article 371A of the Constitution to Nagaland. The first and only civic body election in Nagaland was held in 2004 without any reservation of seats for women. The State government amended the 2001 Municipal Act in 2006 to include 33% reservation for women in line with the 74th Amendment. This triggered widespread opposition forcing the government to indefinitely postpone the ULB polls in 2009. Efforts to hold the elections in March 2012 met with strong protests and in September 2012, the State Assembly passed a resolution to exempt Nagaland from Article 243T



of the Constitution which is related to the reservation for women. This resolution was revoked in November 2016 and elections to the civic bodies with 33% reservation were notified a month later. The notification led to widespread mayhem in which two people were killed in large-scale violence and arson. This made the government declare the process to conduct election null and void in February 2017. In a special session in November 2023, the Assembly unanimously passed an amended Municipal Bill that retained the 33% quota to pave the way for the ULB polls.

#### **How were the hurdles handled?**

Two issues had been stalling the civic polls for 20 years in Nagaland, which had its first women MLAs 60 years after attaining statehood in 1963.

One was the women's reservation for the post of chairperson in the municipal bodies and the other was the taxation on immovable properties. The Nagaland Municipal Act of 2023 did away with the reservation for the chairperson's post and taxation on immovable property while retaining eight types of taxes, fees, and tolls. Former Chief Minister T.R. Zeliang, whose government was a casualty of the civic poll-related unrest in 2017, said during the special Assembly session in 2023 that the 33% reservation was broadly accepted after a series of consultations with the stakeholders and appealed to the women "not to let the issue of reservation for the post of chairperson be a bottleneck in the successful conduct of the ULB polls". The tribal bodies were initially opposed to reservation as Naga women have traditionally not been part of the decision-making bodies while pointing out Article 371A insulates the religious and social practices of the Nagas from any Act of Parliament apart from the customary law and procedure and ownership and transfer of land and its resources.

#### **How was the reservation of seats worked out?**

According to the April 30 notification, the ULB polls will be conducted under the Nagaland Municipal Act of 2023. It said the filing of nomination will be held from June 7-11, while the scrutiny of nominations will be held on June 13, and the last date of withdrawal of candidature will be June 20. The results will be announced on June 29, three days after the day of polling. Four days before the notification, the Cabinet approved the wards reserved for women. Accordingly, eight out of 23 wards in Dimapur, the State's commercial hub, six out of 19 wards in Kohima, the State's capital, and six out of 18 wards in Mokokchung were reserved for women. It was also decided that the reservation of the wards would be rotated.

#### **Is there still any opposition?**

The apex tribal bodies and village chiefs are said to have, by and large, accepted the provisions of the amended Municipal Act. However, the Eastern Nagaland People's Organisation (ENPO) representing the tribes inhabiting six eastern districts of the State, has affirmed its decision not to participate in the ULB polls. The organisation said the decision has nothing to do with the reservation of seats for women but is in continuation of its resolution not to participate in any Central or State election in protest against New Delhi's failure to create the autonomous Frontier Nagaland Territory. All 4,00,632 voters in these six districts shunned the Lok Sabha polls on April 19 and the June 26 ULB polls are likely to draw a blank too.



## INDIA'S PRESS FREEDOM HAS RAPIDLY DECLINED IN RECENT YEARS

India is ranked 159 out of the 180 nations considered in the 2024 edition of the press freedom index, published by the organisation Reporters Without Borders. While this is a marginal improvement from last year, India's performance in the recent past has been consistently poor.

It is important to note that India has been ranked over 100 since 2003, which means that press freedom has been poor for a very long time. However, press freedom has eroded rapidly in recent years, with India being ranked 161 out of 180 nations last year, the lowest ever for the country. In the 2024 index, its ranking improved by two places to 159.

According to the index, press freedom in India is currently comparable to that of the occupied Palestinian territories; the UAE, an absolute monarchy; Turkey, a flawed democracy; and Russia, an authoritarian regime.

This year too, the Scandinavian countries — Norway, Denmark, and Sweden — were the best performers, while Eritrea, Syria, and Afghanistan were the worst. Among the BRICS countries (the old list), Brazil and South Africa enjoy greater press freedom than India, whereas China and Russia are ranked lower. Among South Asian nations, except Bangladesh, all the other countries rank better than India in the latest list.

While India's press freedom has eroded in recent years, the slide has been steeper in many other countries. But many countries have shown a record increase too. Bhutan was ranked 80 in 2019 and slid to 147 in 2024, showing the biggest decline. Hong Kong and Afghanistan followed. On the other hand, the Central African Republic, Timor-Leste, and Montenegro recorded the biggest increases.

Italy and Argentina, which belong to the set of countries where press freedom rankings have dropped in the last five years, were discussed in detail in the report. Argentinian President Javier Milei's decision to shut the public press agency Telam is a "worrisome symbolic act," the report says. In Italy, a member of Prime Minister Giorgia Meloni's coalition government is trying to acquire news agency AGI. Despite improvements in its score, Greece has been criticised over its continued failure to deal with a scandal around wiretapping journalists by the intelligence service and the murder of veteran crime reporter Giorgos Karaivaz in 2021.

Notably, the *Wall Street Journal* has announced that it will shift its Asia headquarters from Hong Kong to Singapore, in a letter sent to staff and seen by AFP. The U.S. newspaper said its decision comes after other foreign firms have reconsidered their operations in the financial hub. Hong Kong authorities this year introduced a new national security law, which critics say expanded the city's powers to prosecute dissidents and was scaring away foreign businesses. This law expands on a national security law implemented by China in 2020 to quell the huge and sometimes violent pro-democracy protests that swept Hong Kong in 2019.

In Israel, Al Jazeera went off air on Sunday after the Benjamin Netanyahu government shut it down following a long-running feud. The Qatar-based channel decried the move as "criminal". Israel's press enjoys less freedom in 2024 compared to 2019: the country's ranking dropped to 101 from 88.



## SAM PITRODA'S CRUDE PARALLELS TO EXPLAIN DIVERSITY SHOW HOW, FOR SOME INDIANS, SELF-WORTH IS SKIN DEEP

No one can accuse Sam Pitroda of choosing his words too carefully. After giving the 2024 Lok Sabha campaign one of its main talking points with his comments on inheritance tax, the former Indian Overseas Congress chairman has once again kicked off a row that his party is scrambling to distance itself from and which has cost him his position. With the intention of celebrating Indian diversity, Pitroda said in an interview, "People in the East look Chinese, people in the West look like Arab, people in the North like, maybe, White and people in the South look like African." Surely, Pitroda, a longtime US resident, should know the connotations of such descriptors and their links to prejudice.

The fact that there is something truly unique and wonderful about how India, despite all its differences, holds together needs more nuanced articulation. But is it really surprising that, coming from a nation which still props up a skin-lightening industry worth several thousand crores, Pitroda's instinct, in explaining Indian diversity, was to latch onto differences in colour and facial features? If anything, this instinct is merely an extension of the still widely-held belief in India that the hue of one's skin is not just a matter of melanin count, that it says something about the value of the flesh and blood underneath.

There is, in fact, a rich irony in the outrage over Pitroda's words, given that much of the ire is directed at the comparison of south Indians to "Africans". This strand of condemnation is based on the assumption that to be compared to Africans is somehow undesirable — given the history of racism against people of African origin. A post script: Some decrying Pitroda's comments have called out the African parallel, not the "White" one. When it comes to prejudice, perhaps Pitroda and some of his critics are painted in the same hue.

## TIME TO TALK

Tamil Nadu's latest application in the Supreme Court of India on the Mullaperiyar dam row shows that even 10 years after the Court's decisive judgment allowing water to be stored till 142 ft. from the previously reduced 136 ft., several issues with Kerala still remain unresolved. In a rejoinder to Kerala's reply in a case filed by an activist, Tamil Nadu, the beneficiary-owner State, has accused Kerala, where the dam is located, of "crying foul" about the safety of the 129-year-old structure, while at the same time "wilfully obstructing" work essential for its maintenance. Despite the constitution of three panels, i.e., a Supervisory Committee (which was reconstituted by having a technical member from each State in June 2022) and two sub-committees (one of which is under the National Executive Committee of the National Disaster Management Authority) to ensure a high level of preparedness to face any disaster related to the dam, no one is any closer to finding a solution to the pending issues. Tamil Nadu's grievance is that the reconstituted Supervisory Committee, despite having powers under the Dam Safety Act, 2021, had "miserably failed" to ensure that Kerala and its instrumentalities permit and facilitate dam strengthening and other related works. Tamil Nadu has also been pressing for the early completion of a comprehensive dam safety evaluation within five years, by December 30, 2026, as stipulated under the 2021 law.

But despite unresolved issues, judicial intervention has seen the adoption of rule curve, a tool in decision-making for smooth operation of the dam's shutters, especially during floods, and the gate operation schedule, notwithstanding Kerala's reservations. Apart from the dam-related issues, the proposal of a mega car parking project of the Kerala government is a matter of litigation. The





conclusion of the Survey of India that the project site is outside the leased area has been disputed by Tamil Nadu. As for Kerala, dam safety has been its primary concern and it wants to proceed cautiously. It is time that the two State governments, which enjoy good relations, resumed bilateral negotiations to find a solution to pending problems while retaining their liberty to adopt legal recourse. Courts take their own time to arrive at their conclusion, even though Tamil Nadu has a more favourable track record with the Supreme Court than the other State on Mullaperiyar, going by the 2006 and 2014 judgments. As water and dam safety can be used by some elements to arouse emotions, the political leadership in both States should be proactive in thrashing out the differences. The proposed talks, even in the event of not leading to any major breakthrough, may at least provide both States an opportunity to appreciate each other's position better and leave no room for vested interests to vitiate the atmosphere.

## VICISSITUDES OF A WEDDING

Koovagam, a tiny village 30 km from Villupuram, is a popular destination for transgender celebrations, drawing spectators from all over India. In the Tamil month of *Chithirai* (mid-April to mid-May), the 18-day Koothandavar festival takes place, with evocative ceremonies on the last two days. Approximately 50,000 people congregate for the celebration, a time when local enterprises flourish. Residents of the village who work in big cities come back to run small businesses such as flower shops, bangle shops, boutiques, and food stalls. Some engage in making the *thaali* (sacred yellow thread) as it is the major part of the festival.

In a Tamil version of the Mahabharata, a character called Aravan offered himself as sacrifice for the Pandavas' triumph in war. It is said he had a boon of marriage before his sacrifice but no woman wanted to marry him as it would mean widowhood. Eventually, it is said Lord Krishna married Aravan after taking the form of Mohini. Lore has it that Lord Krishna grieved for Aravan as a widow. In Koovagam, the rituals trace the legend. Transgender women dress as brides on the 17th day, and the priests of Koothandavar temple tie *thaali* for them.

On the last day, parts of the Koothandavar idol is brought from various parts of Tamil Nadu and assembled before being taken on a chariot. Transgender women gather and perform the *kummi* dance as the chariot moves. The crowds then travel a couple of kilometres the *Natham*, where the priests break the transgender women's bangles and cut the *thaali*. Lord Koothandavar, their spouse, has passed away, and they weep in sorrow. The transgender women rub off the *kungumam* (red turmeric marks on the forehead) and dress in a white sari.

One transgender woman compared her personal life to the annual event in Koovagam. "Our lives are safe and cheerful one day, and then they turn disastrous the next. It is hanging by a thread," she said.

## SPACE DEPT'S COMMERCIAL ARM SEEKS PVT PARTNERS TO MANUFACTURE ITS LARGEST ROCKET

New Space India Limited (NSIL) — the commercial arm of the department of space — has called on private players to manufacture its largest launch vehicle LVM3. This is the launch vehicle that propelled Chandrayaan-2 and Chandrayaan-3 to the Moon. A human-rated version of the same vehicle will be used for the Gaganyaan mission as well.





- LVM 3 was initially used for missions to placed in the large geosynchronous orbits. The commercial capability of the vehicle was first demonstrated when it was used to deploy multiple satellites in the low earth orbit.
- Two batches of 36 satellites each were launched using the vehicle in 2022 and 2023 commercially for internet provider OneWeb.
- “The planned technological advancements are expected to significantly improve the LVM3 payload capacity in the coming years... NSIL recognises that there is a growing demand for launching heavier communications satellites as well as satellites for global mega LEO (low earth orbit) constellations,” said the request for qualification by the agency.
- This is in line with the government’s vision to increase participation of private players, making them capable of manufacturing complete launch vehicles instead of remaining mere producers of parts.

**For Your Information:**

- Utilising the services of SpaceX for the first time, ISRO will deploy its heavy communication satellite GSAT-20 through the Falcon-9 rocket of the private space agency towards the middle of this year.
- Falcon-9, a reusable rocket, can carry double that weight, over 8,300 kg, to GTO.
- The Indian satellites flight on Falcon-9 has been facilitated by the NewSpace India Limited (NSIL), the commercial arm of ISRO, that entered into a launch agreement with SpaceX last year.
- According to the ISRO’s Chairman, Private players in space technology will certainly help speed up the research in the field. In India, there are two companies-Skyroot Aerospace and Agnikul Cosmos.

#### UTTARAKHAND FOREST FIRE: CLIMATE-PROOF THE STATE

At least five people have lost their lives in the fires that have now spread over 1,000 hectares of forests in much of Uttarakhand. There is a danger of the blaze fanning out to heavily populated urban centres including Nainital city. Poor visibility has constrained the Air Force’s firefighting efforts. Experts believe that burning forests intensify heat and lead to black carbon emissions, adversely affecting water systems and air quality. The state government has blamed the fires on human activities and banned people from setting fire to fodder for a week. Urban bodies have been asked to stop people from burning solid waste in and around forests. These are much-needed emergency measures. Forest fires are, however, a far too serious problem to be doused by bans and punitive measures. The gutting of Uttarakhand’s forests is a sign of the aggravating climate crisis. Securing people’s lives and protecting the biosphere will require a diverse range of experts to put their heads together — ecologists, climate scientists, geologists, fire safety and disaster management professionals. Administrators will have to find ways to secure the support of communities.

Nearly 95 per cent of forest fires in the country, including in Uttarakhand, are initiated by human activities. Historically, the accumulation of pine needles on the forest floor during the summer months was the main reason for the fires in the Himalayan season. Some of the combustion is necessary for the forest to regenerate — the burning of litter promotes the growth of fresh



grasses. However, the ecological beneficial activity of the past has assumed a severely destructive character in recent years. Fires, as several Forest Survey of India Reports point out, are also caused by people clearing land for agriculture or as a result of accidental sparks — from discarded cigarette or beedi stubs for instance. February to June is usually the time when blazes erupt in Uttarakhand. There is growing evidence that this season is beginning early. For instance, the state reported the highest number of fire alerts in the country in the second week of January. This was also an abnormally dry spell for the region. In fact, the monsoon was deficient in large parts of the state last year and it also recorded a 70 per cent rainfall shortage in November and December. The aridity has aggravated this summer. Uttarakhand has witnessed its driest April in five years. In such moisture-deficient conditions, fire spreads fast, especially in oxygen-rich environs such as forests.

The Himalayan state's forest department has initiated remedial measures like putting in place firelines — gaps in vegetation to check the spread of the blaze. But Uttarakhand's forests need more proactive measures including putting in place weather prediction systems, satellite monitoring and training communities to become first responders. Much damage is regularly inflicted in Uttarakhand by natural calamities that can, by all accounts, be blamed on faulty policymaking — floods and landslides, for instance. The ecologically fragile state must be climate-proofed.

#### CSIR TELLS ITS STAFF TO REFRAIN FROM WEARING IRONED CLOTHES ON MONDAY

In an unconventional step to prevent some carbon emissions, the Council of Scientific and Industrial Research (CSIR), which runs a network of 37 laboratories, has asked its staff, research scholars, and students to “refrain from wearing ironed clothes every Monday starting May 6.”

— “An iron takes about 800 – 1200 Watts of power to operate, which is 20-30 times more than the power taken by a bulb. 74 per cent electricity in India is produced using coal. Ironing one pair of clothes for a family of five (using an iron for 30-60 minutes) can thus result in the emission of one kg of carbon dioxide.”

— Mumbai-based Energy Swaraj Foundation had launched ‘Wrinkles Achche Hai’ earlier this month. The Foundation believes in Mission LiFE, that is Lifestyle for Environment, a mass movement by India showcasing the country's dedicated efforts and simple acts in daily lives with ‘significant’ potential to contribute towards fighting climate change.

— CSIR was founded by noted scientist Shanti Swarup Bhatnagar in 1942 to bring industry and scientific institutions to work in tandem in the country.

#### **For Your Information:**

— As the world's third-largest emitter of greenhouse gases, India is a crucial player in the global fight against climate change.

— Under the global climate change framework, countries are supposed to measure their annual greenhouse gas emissions every few years, and submit it to UNFCCC for maintaining a global inventory. This used to be called National Communication, NATCOMs, under the 1997 Kyoto Protocol mechanism. Under the Paris Agreement that has replaced Kyoto Protocol, this submission is called Biennial Update Reports, or BURs.



## MDH-EVEREST ROW: FSSAI RAISES DEFAULT LIMIT FOR PESTICIDES IN SPICES BUT WILL THAT IMPACT YOUR HEALTH?

The country's apex food safety regulator, the Food Safety and Standards Authority of India (FSSAI), has increased the default limit for pesticide residues in spices to 0.1 mg/kg last month, a ten-fold increase over the previous 0.01 mg/kg. This will be applicable only in cases where the Indian regulation does not specifically mention the maximum residue limits (MRL) for a pesticide for the crop.

However, the default MRL for other food products remains the same at 0.01 mg/kg.

This comes at a time when some Indian spice mixes were removed from shelves in Singapore and Hong Kong after higher than permissible limits of a pesticide called ethylene oxide was found.

### **What does this mean for your health?**

Even with increased limits, the pesticide residues remain in trace amounts that are unlikely to harm human health, said one of the scientists on the panel that recommended the measure to FSSAI.

They added that deciding MRL is a dynamic exercise based on results of field trials submitted by spice manufacturers to the Central Insecticides Board and Registration Committee (CIB & RC). "The limits are decided and revised based on data from the field trials and available evidence on the impact of the pesticides on human health," the expert said.

### **Why were the limits increased for spices?**

One, it is difficult to keep the limits below the 0.01 mg/kg limit because of the confounding effect of the large number of phenols present in spices. "Even the sensitive high end equipment can detect it at about 0.1 mg/ kg," the expert said.

Two, imports from other countries may contain pesticides that are approved for use in those countries but not in India. The default MRL is used in cases where the limit for a pesticide for a particular crop is not present in India.

Three, there could be seepage of a pesticide not approved in spices from other crops where it might be allowed.

### **What were the concerns that were raised?**

The activists have said that the higher limit may allow for more pesticides affecting our bodies. Experts from the FSSAI have said that the limits were raised only for the tests to detect the compounds effectively. Action will still be taken if pesticides higher than the limit are used. The government maintains that the limits set by India continue to be the lowest in the world.

The activists have also questioned why compounds that have not been approved for use in India are present. The expert said: "Technically, use of pesticides that have not been registered is illegal but the reality is that farmers use whatever molecule is available to them. The problem with spices is that very few compounds have been approved. At around 40 molecules, the maximum number of pesticides is perhaps allowed for chilli, which is cultivated over large areas and has a lot of commercial interest. This is because companies do not want to invest a lot of money in conducting field trials for smaller crops."



The total number of pesticides registered in India are more than 295, out of which 139 pesticides are registered for use in spices, the government said.

**WITH 56.4% OF INDIA'S TOTAL DISEASE BURDEN LINKED TO UNHEALTHY DIETS, WHAT NEW NUTRITION GUIDELINES PRESCRIBE**

With noncommunicable diseases (NCDs) — cardiovascular disease, cancers, diabetes, etc. — rising, and affecting adolescents and even children, India's premier nutrition research institute has published comprehensive guidelines on the diet of vulnerable groups, including pregnant and lactating women, and children and the elderly.

The guidelines issued by the National Institute of Nutrition (NIN), Hyderabad, which works under the Indian Council of Medical Research (ICMR), also prescribe general principles such as reducing consumption of salt and highly processed foods (such as packaged chips, cookies, bread, ketchup, candy, etc.).

The guidelines say an estimated 56.4% of India's total disease burden can be attributed to unhealthy diets. A healthy diet and physical activity can prevent 80% of Type 2 diabetes cases, and significantly reduce the burden of heart disease and high blood pressure.

**Focus on children, mothers**

Optimal nutrition for mother and child from conception till the age of 2 years is linked to proper growth and development. It can prevent all forms of undernutrition, including micronutrient deficiencies, and obesity.

The report quotes the Comprehensive National Nutrition Survey 2019, which showed high prevalence of lifestyle conditions even in children. Around 5% of children of ages 5-9, and 6% of adolescents, were overweight or obese, almost 2% of children and adolescents were found to have diabetes, and another 10% had pre-diabetes.

The survey found high levels of bad cholesterol (LDL and triglycerides) in 37.3% of children ages 5-9, and 19.9% of pre-teens and teens ages 10-19. Levels of good cholesterol were low in a fourth of all children and adolescents.

Meeting nutrition challenge: what new guidelines prescribe ICMR report data.

**Dual nutrition challenge**

Incidence of micronutrient (zinc, iron, vitamins) deficiencies ranged from 13% to 30% of children between ages 1 and 19. The recommended ideal diet charts for various groups of people takes into account both micronutrient deficiencies and diseases of overnutrition.

While severe forms of undernutrition such as marasmus (a deficiency of macronutrients such as carbohydrates and proteins) and kwashiorkor (deficiency of proteins) have disappeared from the country, manifestations such as anaemia continue, the report says. It puts the prevalence of anaemia at 40.6%, 23.5%, and 28.4% in children under age 5, ages 5-9, and 10-19 respectively.

A study on malnutrition published in The Lancet earlier this year said undernutrition continues to be high in India, but obesity has increased significantly over the last 30 years.



The “faulty dietary pattern” in which unhealthy, highly processed, high-fat, sugar and salt (HFSS) foods have become more affordable and accessible than healthier alternatives, “contributes to deficiencies in iron and folic acid, resulting in anaemia and in the higher prevalence of overweight and obesity among population groups,” the report says.

### **General dietary principles**

The guidelines recommend getting required nutrients from at least eight food groups, including vegetables, leafy vegetables, roots and tubers, dairy, nuts, and oils. Consumption of cereals — the staple of Indian meals — should be restricted, so they contribute only 45% of the total energy (instead of the 50-70% now). Instead, more proteins (pulses, meat, poultry, fish) should be consumed, making up 14% of the total daily energy (instead of only 6-9% now).

Achieving adequate levels of essential polyunsaturated fatty acids (PUFA) and B12 is a challenge for vegetarians. The guidelines recommend consumption of flax seeds, chia seeds, walnuts, vegetables, and greens.

The report says salt consumption should be restricted to 5g a day, and strongly recommends against consuming highly processed foods that are typically high in fats, salt, sugar.

### **Group-specific guidelines**

**Pregnant women:** Small frequent meals for those experiencing nausea and vomiting. The guidelines recommend consumption of lots of fruit and vegetables, especially those high in iron and folate content.

**Infants and children:** For the first six months, infants should only be breastfed, and must not be given honey, glucose, or diluted milk. There is no need to give water, even during hot months. After age 6 months, complementary foods must be included.

**Elderly:** The elderly should consume foods rich in proteins, calcium, micronutrients, and fibre. Apart from pulses and cereals — with at least one-third as whole grains — at least 200-400 ml of low-fat milk or milk products, a fist full of nuts and oilseeds, and 400-500g of vegetables and fruit should be consumed. Exercise is important in order to maintain bone density and muscle mass.

## **NITI AAYOG REPORT FINDS ‘HUGE GAP’ IN CANCER SCREENING AT AYUSHMAN CENTRES**

Six years since the launch, the Ayushman Bharat insurance scheme has been availed of by more than 5.47 crore users across the country — making it the world’s largest medical insurance scheme. But when it comes to cancer screening at the HWCs, there is a “huge gap,” according to a report from 13 states prepared by NITI Aayog, the government’s premier policy think tank.

— This report was prepared by Niti Aayog’s Health and Family Welfare vertical in June last year. It has not been made public yet. It is learnt that its findings have been shared with the Ministry of Health and Family Welfare.

— Besides the Rs 5-lakh insurance cover, the flagship Ayushman Bharat Scheme envisaged the upgrade of primary health centres to Ayushman Bharat Health and Wellness Centres (HWCs). It offered a range of services that included annual screening for those 30 years or older for Non-Communicable Diseases: hypertension, diabetes, and three of the most common cancers in India — oral, breast and cervical.





- As per official protocol, there are three distinct methods of screening for the three cancers: oral visual examination for oral cancer; visual inspection with acetic acid for cervical cancer; and clinical breast examination (CBE) for breast cancer for the people in the age-group 30-65 years.
- Under the Ayushman upgrade, Auxiliary Nurse and Midwife (ANMs) at the HWCs were meant to be trained in these three screening methods. Also planned was the training of Medical Officers and Staff nurses.
- The report also flagged that although NCD screening was underway at most facilities, yearly screening was still largely absent.
- The NITI Aayog teams also found that the HWC staff had limited or no knowledge of the fact that the screening for hypertension and diabetes needed to be done on an annual basis.
- On infrastructure in the HCW, the news was better. The report said that it was in accordance with standards as envisaged in the operational guidelines.
- The gaps in cancer screening are significant in view of the government's focus on prevention and detection of cancer at an early stage.

**For Your Information:**

- Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) was launched in September 2018. The scheme has taken the country closer to Sustainable Development Goal 3.8, which envisions universal health coverage.
- The scheme provides a health cover of Rs 5 lakh per family per year for secondary and tertiary care hospitalisation to more than 12 crore families (bottom 40 per cent of the population), making it the world's largest health assurance scheme.

## MAHARASHTRA GEARS UP FOR TIGER TRANSLOCATION TO SAHYADRI RESERVE IN BID TO REVIVE NUMBERS

The Maharashtra forest department is gearing up for translocation of a few tigers from the Tadoba-Andhari Tiger Reserve (TATR) in Chandrapur to Sahyadri, the lone tiger reserve in the state's western region.

- The Sahyadri Tiger Reserve (STR) is one of only five tiger reserves in the country — Kaval in Telangana, Kamlang in Arunachal Pradesh, Dampa in Mizoram and Satkosia in Odisha being the other four — with zero tigers within the reserve and the translocation is part of a long-term plan to revive the population of the big cats in the northern Western Ghats forests.
- STR straddles Kolhapur, Satara, Sangli and Ratnagiri districts in western Maharashtra. Spread over 1,165 sq km, the reserve was notified in 2010 by amalgamating the Chandoli national park and Koyna wildlife sanctuary.
- The Maharashtra forest department is awaiting the final go-ahead from the Union Environment Ministry. The NTCA had cleared the translocation plan in October 2023. In the initial phase, a male tiger or a pair of male and female tigers would be translocated from TATR to STR.
- The translocation project is an important step in conservation of tigers in the forests of the northern Western Ghats, which form a key wildlife corridor between Maharashtra and Karnataka.



— The 2023 tiger population estimation report highlighted the threats posed to the wildlife corridor between the STR and Karnataka's forests from mining activities, road projects and human settlements.

— The translocation of tigers from TATR will be followed by their translocation from the Pench Tiger Reserve landscape, which is spread over Maharashtra and Madhya Pradesh. In all, the plan involves translocation of eight tigers — three males and five females.

— The translocation is part of the phase-II of the tiger recovery project; phase-I involves preparing the habitat for the big cats' reintroduction, augmentation of prey, improving forest protection and building of a temporary enclosure for their soft release.



# DreamIAS



## BUSINESS & ECONOMICS

### WHY ELECTRIC VEHICLES ARE AT THE HEART OF TRADE FRICTIONS BETWEEN CHINA AND EUROPE

President Xi Jinping's first visit to Europe in more than five years — he arrived in France on Monday and will travel to Belgrade on Wednesday and Budapest on Thursday to meet President Aleksandar Vučić and Prime Minister Viktor Orbán respectively — is taking place at a time of increased tensions between China and some European countries over trade barriers and alleged Chinese espionage.

China's trade issues with the European Union (EU) arise mainly out of friction over exports of cheap Chinese electric vehicles (EVs), and constrained access for European companies to markets in China. Last month meanwhile, six people were charged in Europe with spying for Beijing, and in December 2023, Italy wriggled out of China's Belt and Road Initiative.

President Xi would like to avoid opening a hostile front with Brussels when it is already in a trade confrontation with the United States. He could sign several deals in France, possibly including fresh orders with French aviation major Airbus.

At the same time, his visits to Serbia and Hungary, countries that have close business and ideological ties with China, is a visible outreach to pockets within the EU where the criticism of China's support for Russia's war against Ukraine is far more tempered than in much of western Europe.

#### **The EVs question**

Chinese exports to European markets significantly outweigh European exports to mainland China. The EU has complained that unfair market access is a key reason for this situation.

China's car shipments to foreign markets, and to the EU in particular, have surged in recent years. Last year, the EU opened an investigation into subsidies going into Chinese EVs, which Beijing denounced as an example of "naked protectionism".

Brussels has also opened separate investigations that could limit Chinese solar exports to the EU, and put restrictions on imports of wind turbines and medical devices.

Days ahead of Xi's visit, the European Commission (EC) told three big Chinese EV makers that they had failed to supply "sufficient information" to the anti-subsidy investigators. Should the EC conclude that BYD, SAIC, and Geely had not provided all the facts, it could use "facts available" elsewhere to compute tariffs, which could potentially inflate duties on imports of these vehicles into the EU.

This is significant because the EC used the "facts available" in 10 previous anti-subsidy cases against China to fill in certain gaps, which allowed Brussels a free hand to impose higher duties.

The investigation, launched by EC President Ursula von der Leyen last year, coincides with declining (though still sizable) exposure in China for European companies, including carmakers Volkswagen of Germany and Renault of France. Beijing on its part has launched its own anti-dumping investigation into imports of European brandy — a measure against France, which is said to have lobbied for the EV probe.



### **Fear of Chinese flood**

China-made EVs are projected to make up more than a quarter of all EV sales in Europe in 2024, with the country's share in the market increasing by more than 5 percentage points from a year earlier.

According to the Brussels-based European Federation for Transport and Environment (T&E), an umbrella entity for non-government organisations in the field of transport and the environment in Europe, nearly 20% of battery-powered EVs sold in the EU last year were from China. In France and Spain, close to a third of all EVs sold were shipped from China.

The share of Chinese-made vehicles in the EU is expected to rise to more than 25% in 2024, according to the T&E report, as brands such as BYD and SAIC step up their global expansion plans.

The majority of foreign EVs currently sold in the EU are from Western brands such as Tesla, which manufactures and ships from factories in China.

### **WHY VIETNAM WANTS US TO CHANGE ITS 'NON-MARKET ECONOMY' STATUS**

Vietnam has been pushing the President Joe Biden administration to quickly change its "non-market economy" classification to "market economy", in a bid to avoid high taxes imposed by the US on the goods imported from the Southeastern country.

Although Vietnam has emerged as one of the top trading partners of the US and helped thwart China's expanding influence in the region, it has continued to be on Washington's list of non-market economies for more than two decades. In total, the list includes 12 non-market economies such as Russia, China, and some countries which used to be a part of the erstwhile Soviet Union.

#### **What are 'non-market economies'?**

The US designates a country as a non-market economy based on several factors. These are: if the country's currency is convertible; if wage rates are determined by free bargaining between labour and management; if joint ventures or other foreign investment are allowed; whether the means of production are owned by the state; and if the state controls the allocation of resources and price and output decisions. Other factors like human rights are also considered.

The non-market economy label allows the US to impose "anti-dumping" duties on goods imported from designated countries. In international trade, dumping is when a country's export prices are considered to be intentionally set below domestic prices, thereby inflicting harm to industries in the importing country. Anti-dumping duties essentially compensate for the difference between the imported good's export price and their normal value.

The level of anti-dumping duties is determined by relying on a third country, for instance, Bangladesh, which is a market economy. The US assesses the value of a product to be imported from a non-market economy like Vietnam based on what it is worth in Bangladesh and then assumes that this is the supposed production cost to a Vietnamese company. The company's own data about the costs are not considered.

#### **Why does Vietnam want to get the 'market economy' status?**

Vietnam has argued that in recent years it has implemented enough economic reforms that should get its name off the non-market economies list. The country does meet a number of criteria for the





status to be changed. For instance, Vietnam allows foreign investment, wages are determined by free negotiations between workers and management, and most of the means of production are not owned by the state, according to a report by the Center for Strategic and International Studies (CSIS).

The change in status will also help Vietnam get rid of the anti-dumping duties, making its products more competitive in the US market. Vietnam's Centre for WTO and International Trade has said that the method of calculating anti-dumping duties is flawed as it causes "the dumping margin to be pushed up very high" and does not actually reflect the situation of Vietnamese companies, according to a report by DW.

#### **What are the challenges?**

The road to Vietnam getting the market economy tag is dotted with roadblocks. The US steelmakers and the American Shrimp Processors Association have asked the Biden administration to not change Vietnam's status. The association has cited Vietnam's restrictions on land ownership, the country's weak labour laws, and lower shrimp duties that would hurt its members, to make its case.

The move could also see opposition in Congress, where eight US senators and 31 members of the House of Representatives claim that the change in Vietnam's status "would aid Chinese state firms that have invested heavily in Vietnam, by letting them more easily circumvent US tariffs on their goods," according to a report by Reuters.

Currently, the US Commerce Department is in the midst of reviewing — the process began last year — Vietnam's status. The review is set to end by late July.

### **WHAT ARE THE GROUNDS FOR CHALLENGE TO US LAW FORCING TIKTOK SALE?**

TikTok Inc and its Chinese parent company ByteDance Ltd have challenged the US Protecting Americans from Foreign Adversary Controlled Applications Act, which stipulates that for the social media app to continue in the US, it must be sold to a company not controlled by a "foreign adversary" before January 19, 2025.

The Act, which was signed into law by President Joe Biden on April 24, came after federal agencies and politicians raised concerns about data collection and surveillance through TikTok. The challenge at the US Court of Appeals for the District of Columbia Circuit argues that this "qualified divestiture" is "simply not possible: not commercially, not technologically, not legally".

#### **'Severing US ops not feasible'**

The petition provides three reasons to justify why a sale to create a "standalone US TikTok platform" is not possible.

First, TikTok is a globally integrated platform with content created by users around the world. A standalone US TikTok would be an "island" with a limited pool of content, which would "dramatically undermine the value and viability of the US TikTok business".

Second, the source code for the app would have to be "wrested" from ByteDance and given to an alternative team of engineers with no experience in running the platform — an impossible task within the timeframe provided. This is a requirement under the Act to ensure there is no "operational relationship" between ByteDance and the new standalone US platform.



Third, sale and export of TikTok's proprietary "recommendation engine" is not possible without a licence from the Chinese government, which, the petition claims "has made clear that it would not permit a divestment of the recommendation engine that is a key to the success of TikTok in the United States".

#### **'Alternatives tossed aside'**

TikTok and ByteDance have submitted that they had drafted a National Security Agreement following negotiations with the US Committee on Foreign Investment in the United States (CFIUS). This agreement, they claim, contained protections that were "more robust than those employed by any other widely used online platform in the industry", with several measures to protect user data.

These included the creation of a new subsidiary of TikTok, called TikTok US Data Security, which would have US government-approved Security Directors on its board. They also agreed to subject themselves to third-party verification and monitoring by companies approved by the CFIUS. Finally, the agreement included a "shut-down option" that would allow the government to suspend TikTok's operations in specific cases where the agreement was not complied with.

The petitioners have stated that they have voluntarily begun implementing parts of the agreement that require action from TikTok and ByteDance, and have spent \$2 billion on this so far. But Congress disregarded this, and the Act was passed without giving any reasons or justification.

#### **'Hypothetical threats'**

According to the petition, Congress enacted the law without providing any actual "legislative findings" on the threat posed by TikTok, and instead relied on hypothetical scenarios to explain how the platform could pose a threat in the future.

This, according to the petition, falls short of the legal standard of "compelling interest" in the US, whereby a law must address real harms that are "not merely conjectural (based on incomplete information)" and show that it will "alleviate these harms in a direct and material way".

The filing also claims that the law is "under-inclusive", allowing other platforms that could pose similar problems to continue existing, while being "over-inclusive" by applying to all ByteDance-owned applications without showing that they pose risks for the Act to address. The petitioners claim that the Act turns ByteDance and TikTok into a "vilified class" by prohibiting all current and future operations in the US.

While the Act automatically applies to TikTok and ByteDance, for other companies, a "presidential determination" would be needed which would include the issuance of a public report on specific national security concerns posed, and the assets that must be sold for the company to continue operating in the US.

### **AUSTRALIAN PARLIAMENTARY REPORT QUESTIONS DEAL OVER CONCERNS OF 'CHILD LABOUR' IN INDIA**

At a time when India and Australia are in the middle of negotiations for a broadbasing a mini trade deal into a more comprehensive pact, an Australian parliamentary committee in its report submitted to its lawmakers has raised concerns over child labour in India.



- The report stated that the India-Australia trade deal could lead to an increase in goods imports with lower environmental and labour standards.
- The two countries are currently in negotiations for a comprehensive trade deal, the Economic Cooperation and Trade Agreement (ECTA), eliminating of duties on 96 per cent of value of Indian exports to Australia.
- . India's total exports to Australia in FY24 stood close to \$8 billion, 15 per cent higher compared to the previous financial year.
- Referring to Australia-India Economic Cooperation and Trade Agreement (A-IECTA), the report said, "India has a well-documented presence of child and (forced) labour, making significant contributions to the population of the world in modern slavery".
- In 2022, the Centre for WTO Studies had argued that the immediate imposition of international labour standards would lead to reduction in the total economic welfare worldwide in developing nations as well as developed nations.
- According to 2011 census, India is home to about 1.01 crore working children between the age of five and fourteen years. As per an Indian parliamentary standing committee report, Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh and Maharashtra, employ over half of India's child labour.
- According to the standing committee on labour, textiles and skill development, "child workers might have actually increased in urban areas across all sectors and age categories due to the economic woes brought about by the Covid-19 induced crises."

**For Your Information:**

- According to the 52nd report of the Parliamentary Standing Committee on Labour Textiles And Skill Development Committee, there is an ambiguity in the definition of child under various legislations. It stated, "The implementation of the Policy has to go a long way for achieving the objective of elimination of child labour as per commitments made by the county after the ratification of ILO conventions and to achieve the target stipulated in Sustainable Development Goal 8.7 to end all forms of child labour by 2025."

**A SOB STORY**

Nearly six months after the Centre prohibited onion exports citing runaway prices and supply concerns, it put them back in the 'free' category last Saturday, with the caveat of a minimum export price of \$550 a tonne, and a 40% levy on top. This marked the second significant policy change on onion exports over a span of 10 days. On April 25, 2,000 tonnes of white onion exports were permitted, if certified by the Gujarat Horticulture Commissioner. Coming days before Gujarat's Lok Sabha vote this Tuesday, the move triggered an outcry about preferential treatment from the neighbouring State's farmers. In a press release, the Centre explained that "purely export oriented" white onions entail higher production costs, and nearly one lakh tonne of onion exports had also been allowed that would help Maharashtra, the country's largest onion producer. This did not cut much ice — only a few thousand tonnes of onions had actually been shipped under that export window.

It is no surprise that this conditional freeing up of exports comes just before Maharashtra's onion farming hubs vote on May 20. Justifying the move, the Centre pointed to *mandi* prices stabilising



at ₹15 a kilo since April, a fresh assessment that supplies are, in fact, adequate, and an assertion that the politically charged vegetable is perishable. State BJP leaders proclaimed this will ensure farmers get better prices and income. It is unclear if that will fructify — the floor price plus export duty formulation means exports are viable only at or over an estimated ₹64 a kilo. International onion prices have been easing after Egypt and Pakistan recently lifted their export curbs, much before India. With the latest norms expected to last at least till the next government takes charge, onion farmers will effectively face export curbs for almost a year, starting from last August when a 40% export duty was levied. Straddling the ‘consumer versus farmer’ dilemma is tricky, but some longer term context can guide policymaking towards a nuanced rather than a knee-jerk approach. Before food inflation spiked in the second half of 2023, onion prices had been falling for as many as 21 months till May. They rose about 30% through 2023-24, but from a 21% decline in the previous year. A Centre for Civil Society study reckoned that the average farmer lost 21% of annual income due to onion export bans between January 2015 and March 2020. If anything, the current streak of curbs after nearly two years of falling prices, does not send out a positive sowing signal for farmers. And that is neither good for curbing inflation nor meeting India’s aspirations to be the world’s food supplier.

## EXPORT-IMPORT IN AGRICULTURE SECTOR

India’s agricultural exports fell 8.2% in the fiscal year ended March 31, 2024 on the back of shipment curbs on a host of commodities, from cereals and sugar to onions. The value of farm exports totaled \$48.82 billion in 2023-24, down from the record \$53.15 billion of 2022-23 and \$50.24 billion for the previous fiscal, according to Department of Commerce data.

— The global price recovery following the Covid-19 pandemic and Russia’s invasion of Ukraine resulted in India’s farm exports as well as imports zooming to all-time-highs in 2022-23, before dropping in the fiscal just ended.

— Drivers of exports: the fall in exports to have been led primarily by sugar and non-basmati rice. Concerns over domestic availability and food inflation have triggered ban on these products. Two other items that have borne the brunt of export restrictions — again triggered by domestic shortages and rising prices — are wheat and onion.

— Drivers of imports: There is 7.9% dip in overall agri imports during 2023-24 due to a single commodity: edible oils. Lower global prices, in turn, brought down the vegetable oil import bill to below \$15 billion during last fiscal.

— But even as the foreign exchange outflow on account of cooking oil has reduced, imports of pulses almost doubled to \$3.75 billion in 2023-24, the highest since the \$3.90 billion and \$4.24 billion levels of 2015-16 and 2016-17 respectively.

— Policy takeaways: When governments resort to banning/restricting agri export they usually privilege the interests of consumers over producers. There is a need for more rational export-import policy, balancing the interests of producers and consumers as well as the short- and long-term goals for the farm sector.

### For Your Information:

— As India’s agricultural exports slipped nearly 9 per cent between April to February in FY24 to \$43.7 billion due to the Red Sea crisis, the Russia-Ukraine war, along with domestic restrictions, the government has begun formulating plans to boost exports of 20 items, including bananas,

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





mangoes, potatoes, and baby corn, that have significant growth potential in the global export markets.

## THE SOCIO-ECOLOGICAL EFFECTS OF LPG PRICE HIKES

### The story so far:

Data from the 2014-2015 ACCESS survey, conducted by the Council on Energy, Environment and Water, found LPG's cost to be the foremost barrier to its adoption and continued use in rural poor households. Thus, 750 million Indians primarily use solid cooking fuels — wood, dung, agricultural residues, coal, and charcoal — every day. Solid cooking fuels are associated with innumerable health hazards and socio-economic and environmental impacts.

### Has the govt. pushed LPG use?

The Indian government has often placed a premium on the cooking fuels in rural households transitioning to LPG. The Rajiv Gandhi Gramin LPG Vitrak scheme was launched in 2009 to increase LPG distribution in remote areas; nearly 45 million new LPG connections were thus established between 2010 and 2013. Direct benefit transfers for LPG under the 'PAHAL' scheme were initiated in 2015. In 2016, direct home-refill deliveries were implemented and the 'Give it Up' program enrolled around 10 million LPG consumers to voluntarily discontinue subsidies and transfer their accounts to below-poverty-line households. The Pradhan Mantri Ujjwala Yojana (PMUY) followed, to install LPG connections in 80 million below-poverty-line households by 2020. The scheme also provides a subsidy of ₹200 for every 14.2-kg cylinder, which increased to ₹300 in October 2023.

Fast forward to 2022: of the 54 countries whose LPG prices were available, those in India were reportedly the highest, around ₹300/litre.

In 2023, a study done by the author and Amir Kumar Chhetri showed how local communities of the Jalpaiguri district in West Bengal depend on the forests for fuelwood. The landscape has highly degraded forest remnants in a mosaic of tea estates, human settlements, and agricultural land, thanks to a history of forest conversion and fragmentation. Based on 40 focal group discussions in tea-estate labour colonies and in forest and revenue villages, the study found that residents in the area depend mainly on forests for fuelwood, for both household consumption and to sell. Roughly half of the 214 local shops in 10 markets used fuelwood; the shop-workers reported the cost of a commercial cylinder, ₹1,900, to be exorbitant. Around 38.5% of Jalpaiguri's population is below the poverty line and most of them work in tea estates with a daily wage of ₹250. Against this backdrop, the persistent use of fuelwood as cooking fuel is unsurprising.

### What are suitable alternatives?

While the act of collecting fuelwood gives the people cooking fuel, it also degrades the forest and forces people to risk adverse encounters with wild animals. Due to various government schemes, most households in Jalpaiguri have LPG connections but few refill the cylinder even twice a year. On introduction of the PMUY scheme, many households quickly switched to LPG from fuelwood, and reported that their cooking activities became fast and smokeless, they could forgo the need to rise early and the time and effort spent in collecting fuelwood. But the hike in the price of LPG rendered these advantages short-lived.



Devising locally acceptable, suitable, and sustainable alternatives to fuelwood is important to secure the forests, wildlife and locals' livelihoods. Work is ongoing with the West Bengal Forest Department and Joint Forest Management Committees to help four villages acquire saplings of high fuelwood value on the conditions that they will be native species, prohibited from logging, unpalatable to elephants and will be maintained by locals. Alternatives like efficient cooking stoves, optimised shade tree density in tea plantations, and multi-stakeholder meetings for resource governance are also in the works.

#### **What next?**

Our findings suggest that the LPG price rise, especially over the last decade, could cause socio-ecological crises in places where there are no viable alternatives to fuelwood and socio-economic deprivation is common. Future governments must focus on making, and keeping, LPG affordable. At the same time, they also need to endeavour to free solid cooking fuels from socio-ecological endangerment, like, say, with a national policy on introducing smokeless cooking stoves that consume less fuelwood.

### PERMANENT DELETION OF TRANSACTIONS CAN HELP MAKE E-RUPEE ANONYMOUS: SHAKTIKANTA DAS

Governor Shaktikanta Das on Monday said that permanent deletion of transactions can make the e-rupee or central bank digital currency (CBDC) become anonymous and make it at par with paper currency.

Speaking at the BIS Innovation Summit, Das said India is also working on making the CBDC transferable in the offline mode along with introducing the programmability feature to help its financial inclusion goals.

It can be noted that since the introduction of the CBDC in late 2022, there have been concerns about the privacy aspect, with some saying that the electronic nature will leave a trail of where all the currency has been used, unlike cash which offers anonymity.

"Anonymity can be addressed through legislation and/or through technology. For example, through permanent deletion of transactions," Das said.

"The basic principle is that CBDC can have the same degree of anonymity as cash, no more and no less," he added.

In the past, the RBI brass, including Das and his Deputy T Rabi Sankar have said that technology offers the solutions to such concerns on privacy.

In the run-up to the launch of the pilot, former RBI Governor D Subbarao had in 2021 had flagged the issue of data privacy saying the CBDC will allow the government or the RBI access to all the data on how each unit of the currency has been used and also asked for a strong data protection law to tackle with it.

Meanwhile, Das reiterated that India is working on making the CBDC transferable in the offline mode also, pointing out that one of the key features of cash is that it does not require network connectivity to work.

In February this year, Das announced the offline and programmability features of the CBDC.



“Programmability will facilitate transactions for specific/targeted purposes, while offline functionality will enable these transactions in areas with poor or limited internet connectivity,” Das had said then.

Speaking on Monday, Das said that despite the efforts which are being undertaken by the Reserve Bank, the RBI still sees preference for UPI (unified payment interface) among retail users.

“We of course, hope that this will change going forward,” he said, specifying that the RBI has also enabled interoperability of CBDC with UPI.

India has made CBDC non-remunerative, by making it non-interest bearing to mitigate any potential risks of bank disintermediation, Das said, adding that the central bank creates the CBDC and the banks distribute it.

To widen the reach of the e-rupee, the RBI recently announced the participation of non-banks in the pilot with the expectation that their reach can be leveraged for distribution of CBDCs and for providing value-added services, he added.

## THE KOTAK MAHINDRA BANK CONTROVERSY

What are the restrictions imposed by the Reserve Bank of India on the bank? Has the apex banking regulator carried out similar actions in the past? What do global agencies say about the issue? How has the CEO of Kotak Mahindra Bank responded?

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

The Reserve Bank of India (RBI) on April 24 barred Kotak Mahindra Bank (KMB) from onboarding new customers on its online and mobile banking channels, and issuing fresh credit cards. It would however be allowed to provide these services to its existing customers. The RBI stated the actions were necessitated because of deficiencies observed in the private lender’s IT systems and controls commensurate to its growth. KMB’s CEO Ashok Vaswani stated recently the bank was in continuous dialogue with RBI to attain the desired compliance outcomes.

### **What are these actions based on?**

RBI observed “serious deficiencies and non-compliances” concerning KMB’s IT inventory and user access management, data leak and leak prevention strategy, business continuity and disaster recovery rigour and drill, among other things. This was based on the regulator’s examination of the private bank’s systems for two years, that is, 2022 and 2023. The regulator said KMB continually failed to address concerns in a “comprehensive and timely manner”. The bank was also deemed non-compliant with RBI’s subsequent recommendations or ‘Corrective Action Plans’ (CAPs). CAPs are part of an intervention scheme of the RBI to ensure robustness of regulated entities.

As per the RBI, the compliances submitted by KMB were either “inadequate, incorrect or not substantiated”. Further, in the absence of robust IT infrastructure and risk management systems, its online and digital banking channels have suffered “frequent and significant outages in the last two years”. The latest incident happened on April 15. In a post on ‘X’, the bank’s customer care representative informed that its technical servers were experiencing “intermittent slowness”. The current measures would be reviewed in an external audit to be commissioned by the bank with RBI’s approval to assess remediation undertaken.



### Is this a first?

No. The RBI, like its peers world over, has been particularly wary of how digital banking and the overall financial landscape functions. In December 2020, the regulator had ceased HDFC from launching any new digital products and sourcing new credit card consumers. This was also based on a two-year assessment that had come across recurrent incidents of outage in its internet and mobile banking platforms, alongside payment utilities. The restrictions were lifted more than a year later in March 2022 after a successful remediation.

On similar lines, the RBI in October 2023 directed the Bank of Baroda to suspend any fresh onboarding of customers onto its 'bob World' mobile application. This was also based on "certain material supervisory concerns" with the RBI demanding the rectification of observed deficiencies.

## INDIA IS NOW THIRD LARGEST PRODUCER OF SOLAR POWER

In 2023, India overtook Japan to become the world's third-highest producer of solar power, said a report by international energy analytics agency Ember on Wednesday. India generated 113 billion units (BU) of solar power in 2023 compared to Japan's 110 BU.

In terms of installed power capacity, which includes sources of renewable and non-renewable energy, India at 73 gigawatt (1 GW is one billion watts) ranks fifth in the world while Japan is at third place (83 GW), according to data computed by Ember.

While reflective of the rising share of solar power in India's energy mix, the power produced per year can vary due to fluctuations in a country's power demand and local circumstances which lead to a gap between the installed capacity and actual power produced.

### Large gap

Data from government think-tank, NITI Ayog suggest that as of May 2024, solar power while making up 18% of India's total installed electricity of 442 GW, made up only 6.66% of the power actually produced – reflecting the gap between potential and actuals.

Power demand in Japan decreased by 2% (2 BU) in 2023 after rising in 2021 and 2022, thus allowing India to overtake Japan. While it is unclear if this trend will sustain next year, as surpassing the next country – the United States which is in the second spot – will require India to more than double its current solar production and exceed 228 BU.

The leading producer of solar power in the world is China which produced 584 BU of solar power in 2024 – more than the next four countries combined – the United States, Japan, Germany and India.

### 'Future has arrived'

Globally however, renewable sources of energy made up 30% of global electricity produced. Renewables have expanded from 19% of global electricity in 2000, driven by an increase in solar and wind power, to 30% in 2023. China was the main contributor in 2023, accounting for 51% of the additional global solar generation and 60% of new global wind generation. Combined with nuclear, the world generated almost 40% of its electricity from low-carbon sources in 2023.





Ember forecasts fossil fuel generation to drop in 2024 and the trend to continue in other years, suggesting that 2023 might be the year when the fossil fuel production may have “peaked” globally.

“The renewables future has arrived,” said Dave Jones, Ember’s director of global insights. “Solar in particular is accelerating faster than anyone thought possible.”

#### MSMES ARE NOT PAID ON TIME. THEY NEED TO BE

Micro, small and medium enterprises are a key part of the Indian economy. Not only do they account for a significant share of the country’s manufacturing output and exports, they also employ a sizable section of the labour force. However, among the considerable hardships they face, the lack of access to credit and the issue of delayed payments are particularly serious. Micro and small enterprises, as several studies have shown, account for a majority of the annual delayed payments. Over the years, the government has taken steps to make matters easy for these enterprises. For instance, it launched the Samadhaan portal to monitor the outstanding dues to these enterprises. In the Union budget 2023-24, the government also introduced a provision to ensure timely payments to MSMEs. The typical payment cycle of MSMEs ranges from 90 to 120 days. This large window tends to create mismatches between an entity’s cash inflows and outflows, thereby increasing its working capital requirements. The new provision tried to address this issue by aiming to secure payments to MSMEs within 45 days of the supply of goods and/or services. This was a well-intentioned move. However, it has ended up having unintended consequences.

According to a report in this newspaper, larger companies are trying to circumvent this provision by cancelling orders to registered MSMEs as they prefer the longer payment cycles. In fact, they are now placing orders with unregistered MSMEs, who they would rather prefer to deal with as it gives them greater flexibility in operations. The new provision “allowed for deduction for larger companies” against payments to these enterprises “only after they are paid”. Not being permitted to “make deductions in their tax returns” would only increase their tax liability. There are also reports of the bigger companies trying to “force suppliers to cancel their MSME registration”. After all, the larger companies exercise considerable negotiating heft against their MSME suppliers. This asymmetry in relations has also resulted in a worrying development: MSMEs are choosing to deregister in order to make sure that they do not lose their orders. At the end of last year, the total number of MSMEs registered on the Udyam registration portal stood at 3.16 crore. This includes informal micro-enterprises registered on the Udyam Assist Platform, which according to more recent data stands at 1.5 crore.

The government has initiated conversations with stakeholders for possible solutions to straighten out issues. It has also sought suggestions on ways to ensure “timely clearance of MSME bills”. Delayed payments have hobbled the working of these enterprises for long. They also have difficulty accessing low-cost credit. Appropriate steps must, therefore be taken to resolve the issue related to the window of payments at the earliest.

#### JOBS PICTURE IN PERSPECTIVE

“The India Employment Report 2024, brought out by the Institute for Human Development (IHD) and the International Labour Organisation (ILO), has attracted widespread attention.”

— “The report highlights some major positive developments in the labour market.



(i) The employment quality, as shown by a robust Employment Condition Index, has improved in all states.

(ii) There is an increase in the share of non-farm employment (and a decline in agriculture employment) between 2000 and 2019.

(iii) There is steady increase in regular employment and a decline in unorganised sector employment.

(iv) The female workforce participation (FWFP) rate has increased from 24.5 per cent in 2019 to 37.0 in 2023 is quite remarkable.

(v) Even though there was a massive increase in farm jobs during the pandemic (almost 9 per cent per year), overall non-farm jobs also went up by more than 2.6 per cent, a rate higher than that achieved from 2012 to 2019.

(vi) The unemployment rate has declined from 6 per cent 2018 to 3.2 per cent in 2023.”

— “The report also outlines major emerging employment challenges in the wake of developments during the last two decades as well as distortions caused by the pandemic.

(i) The employment pattern remains skewed towards agriculture, which employs around 46.6 per cent workers.

(ii) The production process has been increasingly becoming capital and skill-intensive, leading to distortions in the labour market, where despite an increase in educational attainments, unskilled and semi-skilled workers abound.

(iii) Women’s participation is still low and they remain largely engaged in somewhat less remunerative jobs in agriculture, unpaid family work and as own-account workers.

(iv) Youth unemployment is the principal challenge.

— “Improving the quality of education and imparting appropriate skills in active partnership with the private sector will continue to be a priority in coming years.”

— “India is likely to have a demographic advantage for at least another decade. With robust economic growth likely to be witnessed in the coming years, the country can reap this advantage.”

**For Your Information:**

— “The report has recommended some policy measures such as:

(i) Emphasis on the growth of labour-based manufacturing and employment-generating services and agriculture.

(ii) Improving the quality of jobs

(iii) Overcoming labour market inequalities

(iv) Skill training and active labour market policies

(v) Generate reliable statistics”



## TURBULENCE AT AIR INDIA EXPRESS: MANAGEMENT SHOULD ENSURE SMOOTH TRANSITION

Since Tuesday evening, over 100 crew members of the Tata Group-owned Air India Express called in sick, apparently objecting to the changes in the “carrier’s HR policies”. The absence of the senior cabin crew, in particular, led to disturbance across the carrier’s network, forcing it to cancel multiple flights — reportedly, around 90 flights were affected on Wednesday. The employee discontent was simmering for some time. As per a report in this paper, a few weeks ago, the airline’s employees union had written to N Chandrasekaran, chairman of Air India, claiming mismanagement, and a “lack of equality in treatment” of employees. Following this latest incident, Air India Express fired several of its senior cabin crew members. However, on Thursday evening, the airline “agreed to withdraw termination letters”, while the crew members “ended their strike as the airline management also agreed to look into their issues”. The protest was not an isolated incident. In the recent past, Vistara, another Tata group airline, also witnessed similar discontent among pilots over changes in their remuneration structure. The Tata group is in the midst of consolidating its four airlines — Air India Express and AIX Connect are being merged, and Vistara and Air India.

Mergers between companies, while expected to produce synergies, can also end up being extremely complex processes. More so if they involve a marriage between a public sector entity and a private sector firm. While several issues can crop up, the problems in many a merger can be traced to HR issues. Differences in organisational cultures and structures can create friction between the two sets of employees. As can the differing remuneration structures. Not to mention tensions between the employees of the firms over their career paths and possible redundancies. During such periods, management must try to ensure a smooth transition and provide avenues to employees so that their grievances can be aired and addressed.

The flight delays and disruptions inconvenienced a large number of passengers, as is evident in the complaints on social media. For consumers, this is compounded by the lack of options in the aviation sector. The airline sector in India is duopolistic. In the first quarter of this year (January-March), Indigo had a market share of 60.3 per cent, Air India was at 12.7 per cent, Vistara at 9.8 per cent and AIX Connect at 6 per cent. Put together, the two airline groups account for almost 90 per cent of the domestic aviation market. A high degree of market concentration, the absence of competition, can lead to higher prices for consumers and lower standards for consumer services, while also impacting innovation. However, aviation is not the only sector in India where such a market structure is visible. The goal of policy should be to enhance competition.



## LIFE & SCIENCE

### WHY IS BOEING CREWED SPACE TEST SIGNIFICANT?

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

At 8.04 am IST on May 7, an Atlas V rocket is set to lift off with a team of two veteran astronauts — Barry Wilmore and Sunita Williams — sitting inside a spacecraft called Starliner, built by Boeing, on the capsule's third test flight and the first with astronauts on board. The astronauts will be set for the International Space Station (ISS) in low-earth orbit. If the mission succeeds, the U.S. will for the first time in its history have two spacecraft to launch astronauts to space.

#### **What is the Boeing Starliner?**

Starliner is a spacecraft that transports astronauts in space, after being launched there by a rocket. It consists of a crew capsule and a service module. The crew capsule houses the astronauts; like others of its kind, it will be able to survive reentry and return to the ground. The service module consists of the equipment and systems the astronauts need to survive in space, including air and temperature control, water supply, sanitation, etc., plus the engines and fuel required to manoeuvre the spacecraft. The service module won't be reusable.

Starliner is more than 4 metres wide and can house up to seven astronauts. It can be fitted atop an Atlas V rocket, operated by United Launch Alliance, a joint venture between Boeing and Lockheed Martin.

#### **When was Starliner commissioned?**

On September 16, 2014, NASA announced it had awarded contracts to SpaceX and Boeing to fly astronauts to the ISS. The "maximum potential values" of the fixed price contracts, based on U.S. Federal Acquisition Regulations, were \$4.2 billion for Boeing and \$2.6 billion for SpaceX.

Boeing was expected to conduct Starliner's first crewed launch in 2017. A slew of delays followed, however, and its first uncrewed orbital test flight happened only in December 2019, when the capsule was launched and expected to dock with the ISS. But a software error left it in the wrong orbit and it returned safely to ground the next day without docking. In May 2022, Boeing repeated the test flight, this time as a full success — docking with the ISS, undocking after four days, and returning to the ground. The May 7 test will repeat this procedure but with astronauts onboard.

Even if the launch happens on time, it will ultimately have been delayed by seven years and with Boeing having overshot its budget by \$1.4 billion. Boeing identified many technical problems even after the 2022 flight, and then there was the pandemic.

#### **What is Starliner's purpose?**

Since being awarded the NASA contracts, SpaceX has flown 13 missions to the ISS onboard its Dragon crew capsule (which can also house seven astronauts). Assuming Starliner's crewed test flight is successful, SpaceX and Boeing will take turns launching astronauts to the ISS — each crew's expedition lasts up to six months — until the ISS is decommissioned next decade. After NASA shut its Space Shuttle programme in 2011 and before SpaceX's Dragon capsule got ready in 2020, only Russia's Soyuz rocket and capsule could ferry astronauts to and from the ISS.





### Why is the mission significant?

The mission's success is crucial for both NASA and Boeing. Currently, NASA has only one private company, SpaceX, which can take its astronauts and cargo to the ISS. Starliner getting approval for conducting routine flights to and from the ISS would give NASA a backup and option to not depend on one company or vehicle for space launches.

The success, however, is more important for Boeing. "It's a really big day for Boeing", Dr Simeon Barber, a space scientist at the UK-based Open University, told the BBC.

"The company has been working on the spacecraft for so long, they have had a few problems with the test flights and there's a lot riding on this".

If Starliner completes its objectives, it will also help Boeing challenge SpaceX's dominance in the commercial space industry.

### What is the flight test profile?

Starliner's first crew flight test will be piloted by two veteran astronauts, Mr. Wilmore and Ms. Williams. After being launched by an Atlas V rocket, Starliner will carry them to the ISS, where the duo will stay for eight days. The capsule will return and descend to the ground, probably at a location in New Mexico.

In March, Mr. Wilmore told Ars Technica Boeing's aeroplane division and the Starliner programme "don't cross". He also asked people to step back from expectations that the test will be flawless, that it was being conducted so Boeing could fix any final issues in preparation for commercial operations.

## PLASTIC SOLUTION

The Global Plastics Treaty, an ambitious initiative involving at least 175 United Nations member nations to eliminate the use of plastics, concluded its fourth round of negotiations recently. The goal is to finalise a legal document by the end of 2024 with timelines by when countries must agree to curb plastic production, eliminate its uses that create wastage, ban certain chemicals used in its production and set targets for recycling. Unfortunately, an agreement is not in sight. There is yet another round of negotiations scheduled in Busan, South Korea this November. The primary hurdles are economic. Oil producing and refining countries such as Saudi Arabia, the United States, Russia, India and Iran are reluctant about hard deadlines to eliminate plastic production. A coalition of African countries, supported by several European nations, is in favour of a year, around 2040, to ensure that a timeline for reduction is in effect. There is also disagreement on whether contentious elements in the treaty should be decided on by a vote or consensus — the latter implying that every country has a veto. India's opinion, other than being uncomfortable with binding targets, is that a legally binding instrument to end the plastic pollution must also address "... availability, accessibility, affordability of alternatives including cost implications and specifying arrangements... for capacity building and technical assistance, technology transfer, and financial assistance". This language — and India is not the only proponent — is reminiscent of the principle of 'common but differentiated responsibility' enshrined in climate talks. Under this, countries must have a common target but those more privileged must support others and take on stricter targets themselves.



In the year that the plastics treaty was mooted, in 2022, India brought into effect the Plastic Waste Management Amendment Rules (2021) that banned 19 categories of “single-use” plastics. It, however, does not include plastic bottles — even those less than 200 ml — and multi-layered packaging boxes (as in milk cartons). Moreover, even the ban on single-use plastic items is not uniformly enforced nationally, with several outlets continuing to retail these goods. The global distribution of the plastic pollution is unequal with Brazil, China, India and the U.S. responsible for 60% of plastic waste, according to a report by the non-profit EA Earth Action. Much like how transitioning away from fossil fuel invites its own challenges, plastic pollution cannot be ended by merely signing treaties. There needs to be much greater investment in alternative products and making them affordable before realistic targets are decided upon.

## WHAT IS ARTIFICIAL GENERAL INTELLIGENCE (AGI), AND WHY ARE PEOPLE WORRIED ABOUT IT?

In a recent interview, Sam Altman, CEO of OpenAI, expressed his commitment to invest billions of dollars towards the development of Artificial General Intelligence (AGI). But even as Altman continues to champion what is considered to be the pinnacle of AI development, many in the global tech community are very apprehensive. Here is why.

### What is AGI?

AGI refers to a machine or a software that can perform any intellectual task that a human can do. This includes reasoning, common sense, abstract thinking, background knowledge, transfer learning, ability to differentiate between cause and effect, etc.

In simple words, AGI aims to emulate human cognitive abilities such that it allows it to do unfamiliar tasks, learn from new experiences, and apply its knowledge in new ways.

Humans learn through their experiences — in school, home, or elsewhere; by talking to people or observing things; by reading books, watching television, reading articles, etc. The human brain then uses the information it has gathered to make decisions (often subconscious) that solve any given problem, or come up with a new one.

With AGI, researchers aim to build a software or computer that can do all this — everything that a human computer does. Think of having a super intelligent robot friend who can understand everything you say, learn new things just the way you do, and even think of problems to find solutions.

### How is AGI different from AI we already use?

The main difference between AGI and the more common form of AI, also known as narrow AI, lies in their scope and capabilities.

Narrow AI is designed to perform specific tasks such as image recognition, translation, or even playing games like chess—at which it can outdo humans, but it remains limited to its set parameters. On the other hand, AGI envisions a broader, more generalised form of intelligence, not confined to any particular task (like humans).

This is what puts AGI at the summit of all developments in artificial intelligence. Since the very beginning, the thrust behind AI development has been to broaden its capabilities. The reason why



ChatGPT, launched in November 2022, piqued global interest was its ability to come up with human-like text responses.

Since then, AI models have gotten progressively better and more sophisticated, as billions of dollars have been pumped in to fuel research. The creation of AGI is like the final frontier in this development.

#### **Is this a new idea?**

No. The idea of AGI first emerged in the 20th century with a paper written by Alan Turing, widely considered to be the father of theoretical computer science and artificial intelligence.

In ‘Computing Machinery and Intelligence’ (1950), he introduced what is now known as the Turing test, a benchmark for machine intelligence. Simply put, if a machine can engage in a conversation with a human without being detected as a machine, according to the Turing test, it has demonstrated human intelligence.

When Turing wrote this influential paper, humans were nowhere close to developing artificial intelligence — even computers were in their nascency. Yet, his work led to wide-ranging discussions about the possibility of such machines, as well as their potential benefits and risks.

#### **How can AGI help humanity?**

In theory, AGI has innumerable positive implications. For instance, in healthcare, it can redefine diagnostics, treatment planning, and personalised medicine by integrating and analysing vast datasets, far beyond the capabilities of humans.

In finance and business, AGI could automate various processes and enhance the overall decision-making, offering real-time analytics and market predictions with accuracy.

When it comes to education, AGI could transform adaptive learning systems that work towards the unique needs of students. This could potentially democratise access to personalised education worldwide.

OpenAI’s Sam Altman in an interview with The Wall Street Journal said that AGI will lead to a “lot of productivity and economic value”, and will be “transformative”, promising unprecedented problem-solving capabilities and creative expression.

#### **What then drives the skepticism regarding AGI?**

Despite the promise AGI holds, it continues to fuel widespread apprehensions, due to a number of reasons. For instance, the humongous amount of computational power required to develop AGI systems raises concerns about its impact on the environment, both due to the energy consumption and generation of e-waste.

AGI could also lead to a significant loss of employment, and widespread socio-economic disparity, where power would be concentrated in the hands of those who control the AGI. It could introduce new security vulnerabilities, the kind we have not even thought about yet, and its development could outrun the ability of governments and international bodies to come up with suitable regulations. And if humans were to become dependent on AGI, it might even lead to the loss of basic human skills and capabilities.



But the most serious fear regarding AGI is that its abilities can outpace human beings', making its actions difficult to understand and predict. This might even lead to a situation where it becomes 'too' independent, so much so that humans simply lose control. And like in many sci-fi movies, this might lead to a point where AGI takes actions against human well-being.

In a 2014 interview to the BBC, the late professor Stephen Hawking said, "The development of full artificial intelligence could spell the end of the human race."

Similarly, AI pioneers Yoshua Bengio, Geoffrey Hinton, and Yann LeCun, collectively known as the Godfathers of AI, have often warned about the catastrophic outcomes of creating AGI, with Hinton even comparing AGI's dangers to that posed by nuclear weapons.

Today, most thinkers in the field advocate for stringent regulations to ensure that the development of AGI is in line with human values and safety standards.

## HOW THE OLYMPIC GAMES GOT THE TORCH RELAY, A TRADITION WITH LINKS TO GREEK MYTHOLOGY

The Olympic torch is taken across cities and countries, carried by thousands of people for each edition of the Olympics. It travels on foot and on aeroplanes and ships, and has linked to the ancient Olympics in Greece.

The Olympic torch arrived in France's Marseilles on Wednesday, marking an important ceremonial moment in the run-up to the summer Games in Paris.

It was first lit on April 16 in the Greek town of Olympia, the birthplace of the ancient Olympics. The flame was then carried around Greece and left Athens aboard a ship for Marseille.

The torch will be relayed across France, and will reach Paris on July 26 — the day of the opening ceremony.

### **What is the history of the Olympics?**

The Olympic Games are said to be around 3,000 years old, beginning as sports contests in Olympia that were held every four years. According to the Olympics website, the date 776 BC is often cited in written sources.

Despite the competitive spirit of the Games, they also signified the possibility of peace. Through a 9th century BC treaty, the tradition of Olympic Truce or Ekecheiria was established. Kings Iphitos of Elis, Cleosthenes of Pisa, and Lycurgus of Sparta signed a treaty allowing safe passage for athletes for their participation in the ancient Olympic Games. This was significant at a time when states were constantly warring with each other, the website says.

However, "In 393 AD, the Christian emperor Theodosius I forbade the celebration of pagan cults, which included the Games," the website says.

The Olympics would only be revived In 1894, thanks to the efforts of French educator Pierre de Coubertin. The first modern-era Games were held in Athens in 1896. The idea of a torch relay came later.





### Flame, mythology, continuity

A symbolic flame was used in the 1928 Games in Amsterdam, but the tradition became solidified with a proposal from Carl Diem, Secretary General of the Organising Committee of the Berlin Games.

“Inspired by torch races that were held in ancient Greek times, Diem suggested that for the 1936 Summer Games a Flame be lit in Olympia and transported to Berlin for what would be the first Olympic torch relay.” And so, the tradition began. More than 3,000 athletes from seven countries participated in the relay.

In Greek mythology, fire was seen as a key element, and a fire was perpetually maintained in various Greek temples. In Olympia, “the flame was lit using the rays of the sun, to ensure its purity, and a skaphia, the ancestor of the parabolic mirror used today for lighting the Olympic flame. A flame burned permanently on the altar of the goddess Hestia, and such fires were also lit on the altars of Zeus and Hera, in front of whose temple the Olympic flame is lit today.” This mirror method continues to be used today.

### Changing tradition

The torch is taken across cities and countries, carried by thousands of people for each edition of the Olympics. It travels on foot and on aeroplanes and ships. Nowadays, common people can choose to participate by reaching out to the organising committee.

The identity of the last person to carry the flame to the opening ceremony is kept secret. They are usually figures from the world of sports or young leaders, who light the big cauldron-like structure kept in the stadium. The flame is only extinguished at the Games’ closing ceremony.

For many years, torch-bearers were young, male athletes. It was only at the Munich Games in 1972 that women and people with disabilities were included among the torch-bearers.

## HAMAS ATTACK, GAZA WAR, UNDOCUMENTED MIGRATION ENTRIES TOP PULITZER HONOURS

The New York Times and The Washington Post were awarded three Pulitzer Prizes apiece on Monday for work in 2023 that dealt with everything from the war in Gaza to gun violence, and The Associated Press won in the feature photography category for coverage of global migration to the U.S.

— The Pulitzers honoured the best in journalism from 2023 in 15 categories, as well as eight arts categories focused on books, music and theatre. The public service winner receives a gold medal. All other winners receive \$15,000.

— The awards are administered by Columbia University in New York, which itself has been in the news for student demonstrations against the war in Gaza. The Pulitzer board met away from Columbia this past weekend to deliberate on its winners.

— The prizes were established in the will of newspaper publisher Joseph Pulitzer and first awarded in 1917.



## WHY RESEARCHERS HAVE CREATED GOLDENE, A SHEET OF GOLD THAT IS ONLY ONE ATOM THICK

For the first time, researchers have created a free-standing sheet of gold that is only one atom thick. This makes gold the first metal to be formulated into (freestanding) 2D sheets — opening up a host of exciting possibilities for the future.

### Developing goldene

Creating 'goldene', as the one-atom thick material has been named, was not easy for the scientists behind the development, from Sweden's Linköping University. It is not that such 2D materials have not been created before.

Since the 2004 development of graphene, the atom-thin material made of carbon, scientists have identified hundreds of 2D materials.

However, coming up with atom-thin metallic sheets has been a challenge, due to metals' tendency to cluster together to make nanoparticles instead. While scientists have previously produced gold sheets sandwiched between other materials, "goldene is the first free-standing 2D metal, to the best of our knowledge", Lars Hultman, part of the team behind this project, told nature.com.

To create goldene, researchers first sandwiched an atomic monolayer of silicon between layers of titanium carbide. When they deposited gold on top of this sandwich structure, the gold atoms diffused into the material and replaced the silicon atoms, forming a trapped monolayer of gold atoms.

Subsequently, scientists etched away the titanium carbide layers to create a free-standing, one atom thick layer of gold. This was done with the help of an age-old Japanese technique used to forge katanas and high-quality knives, using a chemical popularly known as Murakami's reagent.

According to Hultman's estimates, these sheets of goldene are roughly 100 nanometres thick (a nanometre is a billionth of a metre), approximately 400 times thinner than the thinnest commercially available gold leaf.

### Many potential applications

Developing goldene is not for the purposes of scientific curiosity alone — far from it. Scientists believe that the super thin, super light material can potentially revolutionise the electronics industry.

"Goldene holds promise as a great catalyst because it's much more economically viable than thicker, three-dimensional gold," Hultman told sciencenews.org. "You don't need as many gold atoms to get the same function," he said. This means that electronics, which use gold due to its electrical conductivity, can potentially use lesser amounts for the same purpose.

Moreover, the technique used by the scientists to create goldene can, in theory, also be applicable to other metallic objects. Shun Kashiwaya, co-author of the study and a materials scientist at Linköping University, said that the team is already working to make 2D sheets of iridium and platinum.

Lastly, goldene possibly also has some special properties, like other previously developed 2D materials. This is due to the fact that each gold atom, in this case, has only six neighbouring atoms,



compared to 12 in a three-dimensional crystal. Scientists say that future applications could include carbon dioxide conversion, hydrogen-generating catalysis, selective production of value-added chemicals, hydrogen production, water purification, etc.

## CATATUMBO LIGHTNING: A TORRENT OF CURRENT

### WHAT IS IT?

Catatumbo lightning is a mesmerising natural phenomenon that occurs over the Catatumbo River in Venezuela, where lightning strikes almost continuously. This phenomenon primarily happens at the mouth of the Catatumbo River, where it meets Lake Maracaibo, the largest lake in Venezuela.

A convergence of several factors give rise to the unique conditions required for Catatumbo lightning. Warm, moist air from the Caribbean Sea is pushed towards the Andes mountains, where it collides with cooler air descending from the peaks. This collision creates a perfect storm of sorts, as the warmer air is forced to rise rapidly by the shape of the local landscape. And as it does, it cools and condenses, forming towering cumulonimbus clouds.

Meanwhile, the combination of strong winds and temperature differentials generates electrical charges within these clouds. The cumulonimbus clouds — sometimes reaching heights of more than 5 km — load up on static electricity. When the electrical potential within the clouds becomes too great, it discharges in the form of lightning.

Catatumbo lightning is distinguished by its frequency and duration: the strikes occur for up to 160 nights in a year, with an average of 28 lightning strikes per minute at its peak. Thanks to this constant flow of current, the area has earned the title of “the lightning capital of the world”.

## THE UNSEEN EFFECTS OF CLIMATE CHANGE ON MENTAL HEALTH

A defining characteristic of climate change is the ability of its effects to compound rapidly, affecting several walks of human life. Researchers in Canada elucidated

The mercury is soaring across India, with many places reporting unusually high temperature readings. It may not be possible to link each heat event to climate change, but we know climate change is bringing such anomalies to more areas, and with greater intensity.

We also know climate change is disproportionately affecting society’s most vulnerable members, including those with physical ailments, the elderly, the poor, and the socially and economically marginalised. And we also know climate change has become the basis of a slew of psychological afflictions of its own, including eco-anxiety, eco-paralysis, and solastalgia (a form of emotional or existential distress rendered by environmental changes), together with seeding general concerns in communities worldwide about their livelihoods, future, the future of their children, and their culture.

But let’s not forget that climate change’s multi-dimensional assault on reality as we know it also potentially includes being able to worsen existing mental health conditions.

### A dubious distinction

A study published last year in the journal *GeoHealth* reported that an extreme heat event in the Canadian province of British Columbia in 2021 affected people with schizophrenia more than



those with kidney and heart disease. The study's authors, of the British Columbia Centres for Disease Control and Health Canada, also wrote that people with mental health conditions seem to be at a greater risk of succumbing to heat-related deaths. The stakes were found to be even higher for people diagnosed with schizophrenia, anxiety or bipolar disorder.

During the eight-day extreme heat event in 2021, the province of British Columbia experienced temperatures as high as 40 degrees C when the average temperatures have been around 20 degrees C. The region recorded around 740 excess deaths during this heat wave.

To understand who was affected the most during this event, the researchers compared 1,614 deaths recorded over a month in 2021 with 6,524 deaths recorded in the same time period nine years ago. They analysed the data based on 26 medical conditions, including heart disease, schizophrenia, chronic kidney disease, dementia, depression, Parkinson's disease, and osteoporosis.

The scientists wrote that they expected to find people with kidney and heart diseases to be most at risk, but were surprised to find that that dubious distinction belonged to people with schizophrenia. In particular, they reported that 8% of the people surveyed in 2021 were previously diagnosed with schizophrenia as opposed to 2.7% of the people surveyed nine years ago. This was a 200% increase from a summer in which heat waves weren't recorded.

To be sure, while people with schizophrenia were found to be at greater risk of heat-related distress than those with kidney and heart diseases, the latter weren't immune: they were at risk as well, just less so.

#### **Dysfunction of the hypothalamus**

A closer look at the data revealed that of the 280 people whose deaths were confirmed to be related to heat, 37 people had schizophrenia.

"These results show that people with schizophrenia need extra protection, extra support and extra care," Sarah Henderson, one of the epidemiologists who led the study and the scientific director of Environmental Health Services at the British Columbia Centre for Disease Control, told *Science*.

The researchers believe one of the main reasons people with schizophrenia were more vulnerable to heat stress could be as a result of the dysfunction of the hypothalamus, a structure embedded deep in the human brain. Its main function is to maintain the homeostasis of the body, i.e. to keep the body in a stable condition that ensures it can carry out its normal function. This means it controls the body's temperature, heart rate, hunger, thirst, mood, libido, sleep, and the regulation of hormones.

Certain antipsychotic medications prescribed to people with schizophrenia have also been found to interfere with the hypothalamus's workings.

One side-effect of such drugs has been a tendency to raise the body's temperature, which when coupled with anomalously high ambient temperatures can rapidly prove fatal.

People with schizophrenia also often have psychotic symptoms such as hallucinations, delusions, disorganised thinking, and memory loss.

They may also suffer from anosognosia: a condition in which they're unable to sense that they're ill.



All this together with comorbidities like diabetes and hypertension can make life very difficult for people with schizophrenia, including potentially interfere with their ability to seek help.

As it happens, marginalisation, lower economic status, and a propensity for loneliness are risk factors for people with schizophrenia, and the same factors can heighten an individual's vulnerability to heat-related illnesses, as the infamous 1995 Chicago heat event demonstrated.

#### **Yet another tentacle**

Scientists have urged that though some antipsychotic medicines' have the potential to interfere with people's experience of anomalous ambient heat, they shouldn't be discontinued or tampered with because these are 'lifesaving therapies'. They have suggested that the risk factors associated with schizophrenia, including social isolation, should be tackled instead with interventions like counselling.

In a statement from the British Columbia Centres for Disease Control, Faydra Aldridge, CEO of the British Columbia Schizophrenia Society, said, "As demonstrated by research, because individuals living with schizophrenia are more susceptible to heat-related illness, it is essential that families and caregivers are aware of the increased risk, identify potential risk factors and take action to help their loved one during a heat wave."

She added that "educating ourselves to recognise symptoms of heat-related illness and take emergency cooling measures will help ensure everyone's safety during heat waves."

One of the defining characteristics of climate change is the nonlinear nature of its effects, i.e. their ability to compound rapidly, affecting several walks of human life both directly and indirectly. The *GeoHealth* study elucidated one more example of this ability, adding to previous work that examined its influence on everything from domestic violence to child-trafficking.

### **RAPID EVOLUTION**

#### **Does evolution of adaptation always take hundreds of years?**

Evolution is often thought to take over hundreds or thousands of years. But a recent study has found a species of frog which has evolved over within about 25 years. The adaptation was spurred by salt. Researchers collected wood frog eggs from nine populations and allowed them to hatch into tadpoles. Whether populations of tadpoles from more salt-polluted waters had evolved higher salt tolerance was studied. Tadpoles collected from the saltiest wetland experienced a notably longer time until death when exposed to salt than the eight other populations collected from other areas with varying levels of salt, suggesting an evolved tolerance. Frog populations collected from ponds with low and intermediate salt concentrations exhibited similar tolerance curves over a 96-hour exposure. The results provide further evidence that some species of freshwater organisms can evolve tolerance to increasing salinisation, although it may only occur under relatively high concentrations.

### **ORANGUTAN USED PLANT TO TREAT WOUND, SCIENTISTS SAY**

A male Sumatran orangutan named Rakus is seen two months after self-treating a wound with a medicinal plant in the Suaq Balimbing research site, August 25, 2022. Reuters





An orangutan appeared to treat a wound with medicine from a tropical plant—the latest example of how some animals attempt to soothe their own ills with remedies found in the wild, scientists reported Thursday.

Scientists observed Rakus pluck and chew up leaves of a medicinal plant used by people throughout Southeast Asia to treat pain and inflammation. The adult male orangutan then used his fingers to apply the plant juices to an injury on the right cheek. Afterward, he pressed the chewed plant to cover the open wound like a makeshift bandage, according to a new study in *Scientific Reports*.

Previous research has documented several species of great apes foraging for medicines in forests to heal themselves, but scientists hadn't yet seen an animal treat itself in this way.

"This is the first time that we have observed a wild animal applying a quite potent medicinal plant directly to a wound," said co-author Isabelle Laumer, a biologist at the Max Planck Institute of Animal Behaviour in Konstanz, Germany.

The orangutan's intriguing behaviour was recorded in 2022 by Ulil Azhari, a co-author and field researcher at the Suaq Project in Medan, Indonesia. Photographs show the animal's wound closed within a month without any problems.

Scientists have been observing orangutans in Indonesia's Gunung Leuser National Park since 1994, but they hadn't previously seen this behaviour.

"It's a single observation," said Emory University biologist Jacobus de Roode, who was not involved in the study. "But often we learn about new behaviours by starting with a single observation." "Very likely it's self-medication," said de Roode, adding that the orangutan applied the plant only to the wound and no other body part.

It's possible Rakus learned the technique from other orangutans living outside the park and away from scientists' daily scrutiny, said co-author Caroline Schuppli at Max Planck.

Rakus was born and lived as a juvenile outside the study area. Researchers believe the orangutan got hurt in a fight with another animal. It's not known whether Rakus earlier treated other injuries.

Scientists have previously recorded other primates using plants to treat themselves. Bornean orangutans rubbed themselves with juices from a medicinal plant, possibly to reduce body pains or chase away parasites. Chimpanzees in multiple locations have been observed chewing on the shoots of bitter-tasting plants to soothe their stomachs. Gorillas, chimpanzees and bonobos swallow certain rough leaves whole to get rid of stomach parasites.

"If this behaviour exists in some of our closest living relatives, what could that tell us about how medicine first evolved?" said Tara Stoinski, president and chief scientific officer of the nonprofit Dian Fossey Gorilla Fund, who had no role in the study.

#### THE IRONY IN MALAYSIA'S 'ORANGUTAN DIPLOMACY'

Animals can make for great PR. Just as once upon a time, a dog, horse or ermine in a royal portrait could communicate a monarch's qualities (fidelity, power and purity, respectively), in the modern era, animals are used by nations to signal commitment to certain values. For decades, China used



the giant panda to make diplomatic overtures and thaw cooler-than-ideal relations with other nations.

Now, inspired by the success of China's "panda diplomacy" — few, after all, can resist the cuddly black-and-white bear — Malaysia's commodities minister Johari Abdul Ghani has said that orangutans will be gifted to trade partners who buy the country's palm oil. This, he believes, could be a way for Malaysia to distance itself from accusations of unsustainability made against palm oil plantations. History, however, shows that even the most exotic or beautiful of animals can't make up for everything.

Last year, for example, amid diplomatic tensions between the US and China over a range of issues, reports began circulating of pandas in American zoos being in poor health, leading to a high-octane campaign in China for the return of Ya Ya the panda from Memphis Zoo.

Further back in history is the example of Soliman the elephant, given as a wedding gift by King John III of Portugal to Archduke Maximilian of Austria in 1551. The pachyderm's arrival in Vienna reportedly led to a strain in the latter's marriage as not only did Soliman steal the spotlight during the royal couple's honeymoon, the Archduke himself paid more attention to the latest addition in his menagerie than to his new bride. The only one of the great apes in Asia, the orangutan is an endangered species that is found only in the tropical forests of Borneo (Malaysia and Indonesia) and Sumatra (Indonesia).

For Malaysia, facing pressure from environmental groups due to the deforestation caused by expanding palm oil plantations, its diplomatic gift may be laden with far more irony than intended.

## UNDERSTANDING THE SCIENCE BEHIND MAGNETIC RESONANCE IMAGING

MRI scans are used to obtain images of soft tissues within the body. It is a non-invasive diagnostic procedure widely used to image the brain, the cardiovascular system, the spinal cord and joints, various muscles, the liver, arteries, etc

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

For those trying to look inside the human body without surgery, magnetic resonance imaging is an indispensable tool. The underlying techniques were worked out in the early 1970s and later in the same decade, Paul Lauterbur and Peter Mansfield refined them to pave the way for their commercial use. For these efforts, they were awarded the Nobel Prize in medicine in 2003, speaking to the significance of the technique and its place in modern medical diagnostics.

### **What is magnetic resonance imaging?**

Magnetic Resonance Imaging (MRI) is used to obtain images of soft tissues within the body. Soft tissue is any tissue that hasn't become harder through calcification. It is a non-invasive diagnostic procedure widely used to image the brain, the cardiovascular system, the spinal cord and joints, various muscles, the liver, arteries, etc.

Its use is particularly important in the observation and treatment of certain cancers, including prostate and rectal cancer, and to track neurological conditions including Alzheimer's, dementia, epilepsy, and stroke. Researchers have also used MRI scans of changes in blood flow to infer the way the activity of neurons is changing in the brain; in this form, the technique is called functional MRI.



Because of the MRI technique's use of strong magnetic fields, individuals with embedded metallic objects (like shrapnel) and metallic implants, including pacemakers, may not be able to undergo MRI scans. In fact, if they have a credit card in their pocket, the magnetic fields will wipe its magnetic strip!

#### **How does MRI work?**

An MRI procedure reveals an image of a body part using the hydrogen atoms in that part. A hydrogen atom is simply one proton with one electron around it. These atoms are all spinning, with axes pointing in random directions. Hydrogen atoms are abundant in fat and water, which are present almost throughout the body.

An MRI machine has four essential components. The machine itself looks like a giant doughnut. The hole in the centre, called the bore, is where the person whose body is to be scanned is inserted. Inside the doughnut is a powerful superconducting magnet whose job is to produce a powerful and stable magnetic field around the body. Once the body part to be scanned is at the centre of the bore, the magnetic field is switched on.

Each hydrogen atom has a powerful magnetic moment, which means in the presence of a magnetic field, the atom's spin axis will point along the field's direction. The superconducting magnet applies a magnetic field down the centre of the machine, such that the axes of roughly half of the hydrogen atoms in the part to be scanned are pointing one way and the other half are pointing the other way. This matching is almost exact: in around a million atoms, only a handful remain unmatched — that is, a small population of 'excess' atoms pointing one way or the other.

The machine's third component is a device that emits a radiofrequency pulse at the part under the scanner. When the pulse is 'on', only the small population of 'excess' atoms absorbs the radiation and gets excited. When the pulse goes 'off', these atoms emit the absorbed energy and return to their original, lower energy states. The frequency of pulse the 'excess' atoms have to absorb is called the Larmor frequency. Its value depends on the strength of the magnetic field and the type of tissue in which the atoms are present. The fourth and final component, a detector, receives the emissions and converts them to signals, which are sent to a computer that uses them to recreate two- or three-dimensional images of that part of the body.

#### **What are the pros of MRI?**

After the big, powerful magnetic field comes on, the MRI machine activates three magnets that produce smaller magnetic fields that are weaker than the main field by about 80-times, if not more. These fields also have a gradient, that is, they are not uniform. These fields interfere with the main field at the part to be scanned such that the resulting field highlights very specific portions, which can be the focus of the scan.

By turning the gradient magnets on and off in specific sequences, the MRI machine can thus scan portions that are just a few millimetres wide. The sequences can also be organised such that the machine scans different parts of the individual's body without asking them to move inside the bore.

In fact, because of the way the machine is built and the magnets are organised inside it, an MRI scan can practically image the body from all useful directions and, if required, in very small increments.



When the 'excess' atoms emit the energy they'd absorbed to return to their lower energy states, the return happens over a duration called the T1 relaxation time. The hydrogen atoms in water have different values of T1 depending on the tissue in which they're present. An MRI machine exploits this fact to show different tissues in different shades of grey. Clinicians may also inject an individual with a contrast agent — typically a gadolinium-based compound — that lowers the T1 time in some tissues, improving their visibility in an MRI scan.

Finally, researchers have deeply investigated the effects of strong magnetic fields on the body. MRI scans don't pose any threats; once the magnetic fields are taken away, the atoms in the scanned part don't remain affected. There is no long-term harm associated with scans. However, a scan's effects on pregnant women aren't as well-studied, so many scanning facilities simply refuse such appointments.

#### **What are the cons of MRI?**

MRI machines are expensive: depending on the specifications, including the strength of the magnetic fields and the imaging quality, they cost from a few tens of lakh rupees to a few crores. Diagnostic facilities pass this cost on to its patients. Based on the clinical requirements, scans often cost ₹10,000 or more each — a sizeable sum in India, especially for those without insurance, and more so for those required to get multiple MRI scans.

These costs are compounded by the discomfort of using the machine. While it's an advantage that an individual inside the bore doesn't have to move for the machine to scan different parts, the individual is actually expected to lie still for tens of minutes, until the scan is complete. If the individual moves, the resulting image will be distorted and the scan will have to be repeated. The problem is exacerbated if the individual is claustrophobic (although some 'open-bore' MRI machine designs can alleviate this issue).

Generating a magnetic field of strength 1 tesla or more — as the main magnet does — is no mean feat. To do so, a heavy current is passed through coils of wire made of a superconducting material. When the setup is cooled with liquid helium, the wires become superconducting and the current passing through them plus the geometry of the wires produces a strong magnetic field. While the wires don't lose any energy as heat — which a non-superconducting material would — maintaining the setup is energy-intensive, which is expensive.

Further, the switching of such heavy currents within the machine, as the gradient coils are operated in sequence, means the machine produces loud noises when operating.

This can be an additional source of discomfort for the individual.

## **FOLDS AND FAULTS**

Proteins are long chains of amino-acid residues that fold into specific shapes. Properly folded proteins function normally whereas misfolded ones can lead to debilitating diseases. Since these chains are quite long, a given protein can actually fold into one of a very large number of shapes — yet it makes a beeline for a specific shape while avoiding all the others. How and why this happens constitute an important mystery in structural biology called the protein-folding problem. In 2018, five decades after it was mooted, a Google subsidiary named DeepMind developed a purpose-built AI tool to predict the shapes into which different proteins could fold, called AlphaFold. The upgraded AlphaFold 2 followed two years later. Many scientists and technologists acknowledge that these two deep-learning systems have transformed human awareness of





protein structures, a feat the machines demonstrated in the biennial Critical Assessment of Protein Structure Prediction contest. Recently, DeepMind launched AlphaFold 3, which can reportedly predict the shapes with nearly 80% accuracy as well as model DNA, RNA, ligands, and modifications to them. As with the first two AlphaFolds, no. 3 is great for being able to elucidate the folded proteins' structures in seconds rather than the years humans have required with advanced microscopic techniques.

Not surprisingly, the excitement that followed the release of AlphaFold 3 has been unable to escape the hype and overblown expectations that dogged the launches of its predecessors. These machines can predict protein structures with relatively high accuracy but they cannot say why they are folded that way; this is still the task of human scientists. How the AlphaFolds will catalyse drug discovery is also unclear. Many drugs fail to make it to the market from the laboratory because medical researchers are unable to anticipate all the interactions between the drugs' various components and various parts of the body. The protein-folding problem is important to crack but it will not magically improve drugs' chances in human clinical trials. It is a step in that direction. Finally, the free use of AlphaFold 3 is limited while its inner mechanisms are unavailable for public exploration or scrutiny, so far. While the motivation to innovate of DeepMind is laudable, the cutting-edge value AlphaFold 3 presents to health care means the company should explore alternative revenue models in which the system is not trapped behind paywalls or exorbitant prices — a fate that has already befallen scientific papers and medicines born of publicly funded research. Recall that the AlphaFolds' training data itself includes protein structures first elucidated by such research.

#### CAN THE NEW ORGANELLE HELP ENGINEER PLANTS TO FIX NITROGEN?

As proposed by Charles Darwin in the nineteenth century, natural selection, the engine that drives evolution, is how species adapt to their environments. Unlike the Neo-Darwinist consensus, the American evolutionary biologist Lynn Margulis did not believe that random genetic mutations were the sole cause of inherited variation. She came up with a new theory called symbiogenesis. The endosymbiotic theory states that organelles like mitochondria and chloroplasts, the sites of cellular respiration and photosynthesis, were once free-living bacteria that were later ingested by the recipient cells. The theory of symbiogenesis was fiercely challenged, including Margulis's manuscript, which was rejected by 15 academic journals before finally being published in *The Journal of Theoretical Biology* in 1967. It was not until many years later that mitochondria and chloroplasts were accepted as once being free-living bacteria before becoming endosymbionts inside eukaryotic cells.

Two papers published recently, one in the journal *Science* and another in *the Cell*, have generated new interest in the endosymbiotic theory. The discovery concerns nitrogen fixation. Nitrogen is a key component in proteins and DNA of all living organisms. Although nitrogen gas makes up about 78% of the Earth's atmosphere by volume, plants and animals lack a system that can utilise atmospheric nitrogen. Bacteria and archaea help convert atmospheric nitrogen gas to ammonia by nitrogen fixation to make nitrogen usable for plants. Unlike many free-living nitrogen-fixing bacteria, legumes, a class of plants in the family Fabaceae, bear the nitrogen-fixing bacteria in their root nodules. Ammonia is converted to nitrites and nitrates and then back into atmospheric nitrogen with the help of bacteria to complete the cycle. In marine environments, like on Earth, bacteria and archaea are also involved in ammonification, nitrification, and denitrification. Beyond mitochondria and chloroplasts, the current discovery extends the earlier reports of a





nitrogen-fixing cyanobacterium in marine algae and establishes it as a new organelle. The new organelle that the authors call nitroplast co-evolved with its host cell.

In 1998, Jonathan Zehr, at the University of California, Santa Cruz, U.S. discovered a cyanobacterium Candidatus *Atelocyanobacterium thalassa* UCYN-A in the water of the Pacific Ocean capable of fixing nitrogen. Later, Kyoko Hagino at Kochi University, Japan, found the marine algae *Braarudosphaera bigelowii* as the host for UCYN-A and could successfully culture the host cells. Both teams had established UCYN-A as a symbiotic cyanobacterium for marine single-cell eukaryotic algae.

Bonafide organelles need to satisfy several criteria. First, the organelle must be integrated into the function and overall architecture of the host cell. Second, proteins must be imported to the organelle from the host cell to carry out some of its functions. Third, organelles must be in sync with the host cell's growth. Last, organelles must be inherited in the newly dividing cells during host cell division. All these above criteria were satisfied by nitroplast, as presented by several lines of evidence by the authors. During a symbiont's transformation into an organelle within a eukaryotic cell, its genome becomes frugal, encoding fewer proteins and utilizing the host cell's proteins to perform some of its essential functions. In line with expectations, nearly half of the nitroplasts' proteins are from the host cell. Although the reports present evidence of establishing nitroplasts as organelles, the loss of some of nitroplasts' genetic material and migration to the host cell nucleus still needs to be established. Unlike mitochondria and chloroplast endosymbiosis, which happened nearly two billion years back, nitroplast's evolution as an organelle is relatively recent (about 100 million years).

The discovery has revolutionary implications, especially in agriculture. Agriculture was transformed in the last century by the discovery of a method for synthesising ammonia from nitrogen and hydrogen in the laboratory. The current discovery has the potential to play a vital role in getting rid of the harmful side effects of industrial ammonia production. Several novel biotechnological applications may use the result of the current discovery of nitroplasts as independent nitrogen-fixing organelles. They are engineering host cells and their nitroplasts with minimal genomes sufficient to grow efficiently and fix nitrogen, making plant cells fix nitrogen by engineering them to include nitroplasts and organelle transformation in plant cells to introduce nitroplast and its host genes to fix nitrogen. Although promising and futuristic, all these are highly challenging and far from reality.

#### LEPROSY SPREAD BETWEEN RED SQUIRRELS AND PEOPLE: STUDY

Leprosy is one of the oldest recorded diseases in human history and is still prevalent to this day in Asia, Africa, and South America. "For thousands of years, humans were thought to be the only natural host of *M. leprae* until the discovery of *M. leprae* in several wild animals in recent decades, such as armadillos and, more recently, red squirrels and chimpanzees," the authors write. While scientists have traced the evolutionary history of the mycobacterium that causes it, how it may have spread to people from animals in the past was not known beyond some hints that red squirrels in England may have served as a host.

In the new study, the researchers studied 25 human and 12 squirrel samples to look for *M. leprae* at two archaeological sites in Winchester. The city was well known for its leprosarium and connections to the fur trade. In the Middle Ages, squirrel fur was used to trim and line garments. Many people also raised them as pets.



The researchers sequenced and reconstructed four genomes representing medieval strains of *M. leprae*, including one from a red squirrel. An analysis to understand their relationships found that all of them belonged to a single branch on the *M. leprae* family tree. They also showed a close relationship between the squirrel strain and a newly constructed one isolated from the remains of a medieval person, says a release. The study found that the medieval squirrel strain is more closely related to human strains from medieval Winchester than to modern squirrel strains from England, indicating that the infection was circulating between people and animals in the Middle Ages in a way that hadn't been detected before.

"These findings on the natural reservoir of *M. leprae* indicated that *M. leprae* circulates in more wild animals than we suspected, and zoonotic infection may contribute to the epidemic of leprosy. Therefore, it is inevitable that leprosy epidemics can persist for a long time in the future, and we should remain vigilant against the spread of *M. leprae* between humans and wildlife," they write.

## COVID VIRUS IS STILL HERE. WHY AREN'T MORE PEOPLE FALLING ILL?

It seems like a distant memory now, but just three years ago, India was in the midst of its worst phase of the Covid-19 pandemic. The month of May 2021 saw more than 1.2 lakh deaths — around 20% of all deaths attributed to Covid in the country so far. In the first three weeks of that month, more than 3 lakh positive cases were detected every day on average. Daily detections peaked exactly three years ago — on May 6, 2021 — when more than 4.14 lakh positive cases were reported.

The crisis continued for at least two more months, even though cases and deaths declined steadily. Unlike many other countries, India did not face any more deadly Covid-19 waves. The Omicron wave of January-February 2022 saw a massive surge in infections, but not too many severe cases or deaths. And although a few cases continue to be reported even now — there were 850 active cases as of Friday, according to the Health Ministry — the pandemic no longer presents a serious threat.

### So, is the Covid-19 pandemic finally over?

On May 5, 2023, the World Health Organisation (WHO) announced that Covid-19 was no longer a global public health emergency. It was an acknowledgment that the uncontrolled spread of the virus was over, it was not leading to serious diseases, hospitalisations or deaths, and was no longer stretching public health systems in most parts of the world. The declaration was seen as a formal end to the pandemic.

India had withdrawn all Covid-19-related restrictions after March 31, 2022 — shortly after the Omicron wave had dissipated — and ceased the application of the provisions of the Disaster Management Act. Subsequently, state governments removed their mandates for compulsory wearing of masks in public spaces.

However, SARS-CoV-2, the virus that caused the Covid-19 disease, remains very much in circulation — and continues to cause infections and even some deaths. The dominant variant causing the most infections right now is JN.1, a distant descendant of Omicron. JN.1 is a little more efficient at infecting people than its sister variants, but, like all descendants of Omicron, does not cause severe disease.

WHO data show that in the four weeks leading up to April 14, more than 2.42 lakh positive cases were reported across the world, over two-thirds of which were in Russia and New Zealand. About



3,000 cases were reported in India. In this same period, about 3,400 deaths have been attributed to Covid-19 — about 2,400 in the United States, and 53 in India.

Despite very little testing, India is still reporting cases in double digits — 50 cases were detected on Thursday. There was even a death in Kerala. A few labs, including the National Institute of Virology in Pune, Centre for Cellular and Molecular Biology in Hyderabad, and Translational Health Science and Technology Institute in Faridabad, have been tracking the circulation of the virus, mainly through wastewater surveillance and samples from hospitals. Wastewater surveillance has revealed the presence of the JN.1 variant in India as well.

#### **Why aren't more people getting infected with Covid-19?**

Detections may be low simply because very few people are getting tested.

Luck, or chance, has had a role to play in the way Covid-19 has ceased to be a major health risk in the last couple of years. The Omicron variant, which emerged at the end of 2021, had enhanced capability to spread and infect people, but it did not cause severe disease. A large proportion of the world's population gained natural immunity after being infected with Omicron. By the end of 2021, more than half the global population had also received one or the other vaccine, which strengthened their immunity.

The decline in the number of people without immunity, either through natural infection or vaccination, meant that the virus had fewer opportunities to evolve rapidly into newer variants.

However, neither natural infection nor vaccines provide permanent immunity. The effect of vaccines taken in 2021 and 2022 is most likely over. Natural immunity also dissipates after some time. The only reason there is no uncontrolled surge is that people are continuing to get infected with relatively harmless variants, and getting their immunity renewed.

“That is exactly what seems to be happening. People are getting infected, possibly in large numbers. We don't know because not many tests are being done. But in the process, their natural immunity is getting refreshed and extended,” Anurag Agarwal, Dean of Biosciences and Health Research at Trivedi School of Biosciences at Ashoka University, said.

Meanwhile, the fact that the virus has not mutated into a more dangerous variant, has been very helpful. How long this situation will continue is anyone's guess. However, the virus is no longer new to scientists and public health experts, who now have a much better understanding of it, and know what to expect and how to deal with its spread. But the circulating strains need to be constantly monitored and tracked, so that timely interventions can be made.

#### **ASTRAZENECA WITHDRAWS VACCINE: NO NEED TO PANIC**

Ten days after AstraZeneca admitted side effects of its Covid vaccine in rare cases, the company has withdrawn the shots, renamed Vaxzveria in 2021, from the global market. It has cited a “surplus of available updated vaccines” that target new variants of the virus as the reason for its decision. The vaccine major's moves have generated negative sentiments bordering on panic, including among some people in India where AstraZeneca partnered with the Serum Institute of India to develop Covishield — the bulwark of the country's fight against Covid. Such responses might not be surprising given that social media is the prime source of information for a sizable section and the means to distinguish science from pseudoscience are not always at hand. But knee-



jerk reactions from other quarters have also not helped. Especially unfortunate are the politically loaded comments about Covishield during the Lok Sabha election campaigns.

The emergency created by an unknown contagion required due procedures — including clinical trials — and schedules to be compressed. But the crisis also galvanised scientists, medical experts and policymakers to push the frontiers of their disciplines and domains. Vaccine hesitancy tested the persuasion skills of local officials and healthcare workers. It's a testimony to such initiatives that social and economic activities return to normalcy about two years after the virus unleashed its virulence. Vaccination ensured that the contagion took on a significantly less aggressive form after the lethal second wave in the summer of 2021 — when the bulk of the country's population had not received the shots. Hospitalisation and fatality rates remained low even during periods of spike in infection after the second wave.

Covid inoculation drives are now subjects of intensive research. That's how it should be. These studies help generate nuanced information about the safety and efficacy of the vaccines, that could not have been generated with the volunteer size of the trials. Scientists can today draw on databases that comprise inoculated people across nations and continents. Besides helping epidemiologists understand how the jabs work on diverse sections of people, and reaffirming the potency of the shots, such studies shine the light on rare adverse reactions, including thrombosis and thrombocytopenia Syndrome (TTS) — blood clots and low levels of platelets — associated with the AstraZeneca vaccine. Such research will help vaccine developers refine their methods. Technologies used in the Covid jabs — whether the viral vector of AstraZeneca or the mRNA technique of some other developers — are part of a larger battle against infectious diseases. Alarmist reactions against the Covid jabs could raise the head of vaccine hesitancy and hurt the fight against other contagions.

## ALL ABOUT FLIRT, THE NEW COVID-19 VARIANTS

The downstream variants are linked to new cases and a small surge in hospitalisation in the U.S., according to the Infectious Disease Society of America (IDSA). FLiRT cases have also soared in the U.K., South Korea and New Zealand, renewing fears of a fresh COVID-19 wave.

The Indian SARS-CoV-2 Genomics Consortium (INSACOG) has detected 238 cases of KP.2 and 30 cases of KP1.1 circulating in India, as of May 6. The new variants appear to outstrip their ancestor and other Omicron variants. KP.2, the more dominant strain of the two, in particular, is believed to leap past immunity built up from vaccines and previous infections.

However, the periodic COVID-19 spikes are routine and to be expected as “COVID-19 will continue to morph into, not an endemic, but a cyclical disease”, says Rajeev Jayadevan, co-chairman of the National Indian Medical Association (IMA) Covid Task Force in Kerala. The FLiRT variants reframe COVID-19 management as a longer affair, one that demands sustained surveillance, customising precautions and ensuring universal protection for the vulnerable.

### The FLiRT variants

KP.2 and KP1.1 sublineages are descendants of the JN.1 variant of the SARS-CoV-2 virus with two new added spike mutations. They are nicknamed the FLiRT group of variants; the acronym





indicates two specific mutations, which when they occur together, end up conferring greater invasive properties to the virus. The U.S. Centre for Disease Control and Protection says KP.2 accounts for approximately 25% of new cases as of April 27.

In India, “we can confirm that COVID-19 cases are rising, and KP.2 is a commonly found variant,” says Dr. Jayadevan. According to INSACOG, KP.2 has been detected predominantly in Maharashtra, Odisha, Goa and West Bengal; KP1.1 in West Bengal, Maharashtra and Gujarat; KP.3 in Uttarakhand. This is not to say that the variants are not circulating in other regions, but the proactive tracking in these states have identified JN.1’s descendants. The symptoms of the new variant are similar to those of other Omicron subvariants: sore throat, cough, nausea, congestion, fatigue, headache, muscle or body ache, loss of taste or smell.

#### **Immune evasive**

Researchers at the Kei Sato lab in Japan showed the KP.2 variant had an “increased immune resistance ability... more than previous variants including JN.1”. Their preliminary evidence found that KP.2 was able to escape the immune protection derived not only from the most updated vaccine (the monovalent XBB.1.5 vaccine) but also from the breakthrough infection with JN.1 afterwards. KP.2 has “profound immune evasive properties”, notes Dr. Jayadevan. The research, published on the pre-print server *bioRxiv*, showed the variant is thus able to leap over the most recently built immunity fence. More research is needed to understand how deeply and permanently the new mutations evade the immune system, researchers note.

Although immunisation with up-to-date SARS-CoV-2 vaccine produces antibodies recognising JN.1, experience indicates vaccination done earlier is still effective in preventing severe COVID-19 from newer variants. The European Medicine Agency recently recommended “updating COVID-19 vaccines to target the new variant JN.1” before another round of vaccinations is undertaken. Meanwhile, AstraZeneca on May 7 said it has initiated the worldwide withdrawal of its COVID-19 vaccine due to a “surplus of available updated vaccines” since the pandemic.

In India, experts have also detected a new surge of cases since early April, with approximately one in six tests turning positive, compared to zero in March. With limited testing, however, the exact prevalence and geographic spread are unknown. It is too early to say if all the new COVID-19 cases or hospitalisations are due to KP.2 or KP1.1 in India, explains Dr. Jayadevan. Moreover, increased transmissibility does not necessarily mean the new variants will cause more severe COVID-19 illnesses. Precautions and prescriptions remain similar: maintain hygiene, wear masks in crowded places, stay home if unwell, and vaccinate.

#### **COULD BIRD FLU TURN INTO THE NEXT PANDEMIC?**

Several states across the country including Kerala, Maharashtra, Chhattisgarh, and Jharkhand among others have been directed to stay vigilant after the emergence of a highly pathogenic avian influenza that has spread to cattle was detected in eight U.S. states. While the Centre has asked for vigilance, the World Health Organization (WHO) expressed deep concern regarding the increasing transmission of H5N1 bird flu to other species, including humans. “The current bird flu outbreak, which originated in 2020, has affected not only ducks and chickens but also cows and goats, which is why the flu has been described as “a global zoonotic animal pandemic,” it said.

WHO is warning about the risk of the virus evolving to infect humans and gaining the ability to transmit from human-to-human. Although there is no evidence of human-to-human spread yet,





the mortality rate among those infected through contact with animals remains high. Over the past 15 months, WHO has documented 889 human cases across 23 countries, resulting in 463 deaths, a mortality rate of 52%

The Central government in India maintains that Highly Pathogenic Avian Influenza (HPAI), commonly known as bird flu, was first detected in the state of Maharashtra in February 2006. Since then, the country has experienced annual outbreaks of HPAI in different regions, leading to substantial economic losses. The disease has been reported in 24 states, resulting in the culling of over 9 million birds to control its spread. It's important to note that vaccination against HPAI is not permitted in India. The Centre has maintained that with the long-term use of vaccination either the disease has become endemic and therefore widespread, or the infection in affected animals is too difficult to detect. Accordingly, the Government of India does not permit use of any vaccine against avian influenza in the country.

An article titled, 'Bird flu in US cows where will it end' in *Nature* on May 8, 2024, notes that various forms of the H5N1 virus have been circulating since the 1990s. A particularly deadly variant that was first detected in 1996 killed millions of birds and has been found in numerous mammalian species, including seals and mink. But until now, cows were not among the virus's known hosts. US officials first announced on 25 March that H5N1 had been found in cattle. Cows from 36 herds in 9 states have tested positive as of 7 May. Tests of pasteurized milk have found no living virus. But the virus's increasing ubiquity has made scientists uneasy. It adds further that from a human perspective, cows might be one of the worst possible animal reservoirs for influenza because of their sheer number and the degree to which humans interact with them. Culling poultry has curbed previous bird flu outbreaks, that isn't a viable option for cattle. The animals are too valuable and, unlike birds, don't seem to die from the infection.

#### WHAT LED TO LATIN AMERICA'S RECORD DENGUE SURGE

Cases of dengue in Latin America and the Caribbean are skyrocketing. Between January and April 2024, the region has seen more than 5.9 million cases compared to 4.4 million in all of 2023. While some countries are witnessing a surge in dengue much before the peak season, others are recording severe outbreaks for the first time.

Behind the uptick is the obvious reason: soaring global temperatures, which have created ideal conditions for mosquitoes — they spread dengue among people through bites — to thrive. To make matters worse, the world has yet to roll out a high-efficacy dengue vaccine that can thwart the spread at a large scale.

Although dengue fever's fatality rate is quite low, in some cases it can lead to "breakdown fever", which causes severe joint pain, haemorrhage and, sometimes, death.

#### What is happening?

Brazil is the worst affected country in the region. More than 4.2 million people have caught dengue in the country between the start of the year and April 23, which is around 1.8% of the population, according to Brazil's health ministry. So far, more than 2,000 people have died due to the disease — a record of deaths by dengue fever in a single year.

Several of the country's states (there are 26 in total) have declared a state of emergency. The army has set up field hospitals in the capital, Brasília, to accommodate patients, who could not get



medical attention in hospitals. Mosquitoes repellents are sold out and it is not clear when the new stock will arrive, according to a report by The Economist.

Peru and Puerto Rico have also declared a state of emergency in response to a spike in cases of dengue fever. While Puerto Rico reported 549 cases by March-end (compared to 1,293 total cases in 2023), Peru has witnessed 1,35,000 suspected cases and 117 deaths between January and early April compared to 33 deaths in the same period last year. Argentina has recorded a huge spike in the number of cases as well.

Central American countries and Mexico, which usually see a rise in dengue cases towards the end of the year, are already witnessing a spread. The disease has also severely hit countries such as Uruguay and Chile, which have never been seriously affected. “We already have a large number of cases this year, not only in Brazil but also Paraguay and Argentina and other countries — even Uruguay and areas where there has been no transmission of dengue for a century,” said Pan American Health Organization (another arm of the United Nations) director Jarbas Barbosa in a March press briefing.

### **Why is it happening?**

The key driver behind the rising dengue cases is soaring temperatures. In the past 30 years, the region has warmed an average of 0.2 degree Celsius per decade, according to the State of the Climate in Latin America and the Caribbean 2022 report. This has not only led to more frequent and intense extreme weather events but also an increase in the mosquito population.

Most of the mosquito species thrive in warmer temperatures and with global warming the areas where they can breed and survive have increased, including in Latin America and the Caribbean. Higher temperatures have also extended the length of the season when mosquitoes are active, allowing a longer period for the transmission of vector-borne diseases.

“There are ever fewer places [in the region] where temperatures drop below 15 degree Celsius in winter, the level at which mosquitoes tend to die out, so there are more virus-carrying insects in circulation, ready to surge, once temperatures rise in the spring,” according to The Economist report. The situation was exacerbated by the onset of the 2023 El Niño, a weather pattern that led to abnormal warming of surface waters in the equatorial Pacific Ocean, which increased temperatures even more across the region.

Extreme weather events have further multiplied the mosquito population. Untimely rainfall, storms, flooding, and rising sea levels create shallow, stagnant pools of water in which the bugs thrive. On the other hand, droughts lead people to collect and save water in containers that provide breeding places for mosquitoes.

Rapid urbanisation is another factor. “Latin America’s shantytowns are breeding grounds for mosquitoes because of the abundance of standing water, where the insects lay their eggs. Most houses have flat roofs, where water can make pools. Residents who lack basic plumbing often store water in open tanks. Patchy refuse-collection services leave piles of uncollected rubbish which also serve as a mosquito mecca,” The Economist report said.

### **What about dengue vaccines?**

With the ongoing crisis in Latin America and the Caribbean, the need for a dengue vaccine is more urgent than ever. However, a viable dengue vaccine has not become a reality yet.



Dengue is spread when bitten by a female mosquito of Aedes genus and there are four strains of the dengue virus, which is a daunting challenge for scientists.

Speaking to The Indian Express, Virander S Chauhan, president of the Multi Vaccines Development Programme which is located at the International Centre for Genetic Engineering and Biotechnology (ICGEB) campus in New Delhi, said, “The issue is that if a vaccine protects you from one strain, you become more susceptible to other strains. The biggest challenge is to develop a vaccine which works against all the strains.”

Although scientists have created vaccines that protect against the four strains, they are either expensive or have serious limitations. For instance, Qdenga — a Japanese-made vaccine — costs about \$115 per dose in Europe and \$40 in Indonesia. Brazil, which has bought it for \$19 per dose after negotiating a lower price for a large-scale purchase, is using it to vaccinate its population. However, there will be enough vaccines to fully vaccinate only 3.3 million of Brazil’s 220 million people in 2024, according to a report by The New York Times.

In February, Takeda Pharmaceuticals, which makes Qdenga, and Hyderabad-based vaccine maker Biological E announced that they have formed a strategic partnership to accelerate access to the vaccine. BE said it would produce up to 50 million doses a year. Experts believe that the deal could bring down the price of the vaccine, but BE is unlikely to get regulatory approval to market Qdenga before 2030, the NYT said.

Another vaccine is Dengvaxia, which is manufactured by Sanofi Pasteur, a French pharmaceutical company. Its biggest issue with this shot is that it can be given only to people who have already had a dengue infection.

Most recently, Brazilian researchers announced that a clinical trial of a new dengue vaccine had provided strong immunity against the disease. The vaccine, delivered in a single shot, has been created by the National Institutes of Health in the US and it uses live, weakened forms of all four strains of the dengue virus. The vaccine has been licensed for development by the Instituto Butantan, a public research institute in São Paulo, Brazil. Although it may transcend the limitations of its predecessors, it will not be rolled out at a national scale in Brazil for at least a couple of years, the NYT report said.

Serum Institute of India — the world’s biggest vaccine maker — is also testing a single-shot dengue vaccine based on the research of the NIH, according to a March Reuters report.

## IS YOUR BAD CHOLESTEROL RISING DUE TO POLLUTION? HERE’S WHAT A NEW AIIMS STUDY SAYS

If getting stuck in a traffic jam with poisonous fumes swirling around you has been a regular feature in your daily commute, it might have affected your health over the years. A new study, conducted by the Centre for Chronic Disease Control, Public Health Foundation of India (PHFI) and AIIMS, Delhi, has shown that long-term exposure to pollution can increase your bad cholesterol and triglycerides and decrease your good cholesterol levels.

Conducted in Delhi and Chennai, the study found that exposure to ambient PM2.5, or fine particulate matter of 2.5 microns or lesser in diameter, was associated with an increase in low density lipoprotein (LDL) cholesterol and triglycerides and a corresponding decrease in HDL cholesterol among 21,000 participants, who are being followed since 2010-2011. Researchers



have found that exposure to diesel exhaust erodes the antioxidant, anti-inflammatory and protective properties of high-density lipoprotein (HDL) or the good cholesterol.

The study has been part of a large project called Geo Health that has been going on since 2016 and is a collaboration between the Centre for Chronic Disease Control and Harvard School of Public Health. It had already established the link between pollution and hypertension (2020) and diabetes (2023).

The key takeaway of the study, says lead investigator Dr Siddhartha Mandal, is that pollution impacts our cardiovascular system more significantly than thought. And that if we control pollution, a modifiable risk factor, we could improve our cardiovascular health.

“Not only did we see a spike in LDL levels with pollution, we found a differential effect between cities,” he says. So far, diet and physical activity have been the twin pillars for a safe lipid profile. Now it turns out that reducing air pollution is just as important, according to Dr Mandal. Excerpts:

#### **How does air pollution impact lipid levels?**

It causes inflammation of blood vessels in our body and oxidative stress, which is an imbalance between two different types of molecules in your body, free radicals and antioxidants. Now excess free radicals damage your body's cells and tissues, leading to severe diseases like cancer, heart, liver and kidney dysfunction.

When we breathe, PM 2.5 particles go into our bloodstream and are transported into all our organ systems, not just our lungs. This triggers inflammation across our organ systems while oxidative stress changes our tissues, often leading to fat deposition in the liver, calcification and hardening of arteries.

We are trying to understand how pollution also impacts those with a low BMI (body mass index). Indians are highly predisposed to diabetes. Our physiology is a bit unique. There is a hypothesis that PM 2.5 might be affecting us differently than the Western population.

#### **What were the major differences between the Delhi and Chennai cohorts?**

Although Delhi had higher pollution levels than Chennai, the side effects of PM 2.5 were stronger in Chennai. One potential explanation is that the effects of harmful chemicals are steeper at lower levels of pollution. Everyone in Delhi is exposed to higher levels of air pollution. People inhaling 80 micrograms per meter cube of PM 2.5 are already under enough stress, so a saturation of an extra 10 micrograms per meter cube is not going to change external conditions a lot as there is a plateauing effect. But if the range of PM 2.5 goes up from 30-40 micrograms per meter cube to 90-100 micrograms per meter cube, the change is steeper from lower levels. Besides, if we had regions in Delhi where people were exposed to lower levels of pollution, then we would have had a better comparison between cities.

#### **What is the significance of this study?**

The study shows that the effects of pollution are not just short-term or confined to respiratory distress. This is long-term and can cause chronic diseases. If someone already has hypertension, over time the person could develop diabetes as well as other co-morbidities. Air pollution, therefore, is a ubiquitous risk factor.