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DREAMIAS





INTERNATIONAL

HEALING A NATION

With arguably the most unexpected plot twist in the recent history of U.S. politics playing out in the form of incumbent President Joe Biden stepping back from the race for the November election, the hope for building a less toxic and more compassionate paradigm of politics for the next four years has fallen to his nominee, Vice-President Kamala Harris. Ms. Harris, of mixed Indian and Jamaican heritage, has been formally recognised as the Democratic Party's candidate to take on Republican challenger and former President, Donald Trump, after she secured more than a majority of votes from party delegates just before the Democratic National Convention later this month. Now, Ms. Harris is in the throes of a high-speed dash to the finish line, including a flurry of campaign activity relating to her vice-presidential pick, the optics of the Convention, the presidential debates to follow, and the ceaseless generation of media and online advertising material aimed at swaying voters' minds in her favour. Her strategy appears to be working — in picking Minnesota's progressive Governor, Tim Walz, as her running mate, she has partnered with a leader with a reputation for turning Republican districts Democratic. Although Mr. Biden had trailed Mr. Trump by a few points in approval surveys across the critical swing States, Ms. Harris has not only tipped the scale back towards Democrats by a margin of 1.9% based on an updating adjusted average of major national polls, but she has also proven her credentials in pecuniary terms by raising a whopping \$310 million in July, including \$200 million in the first week after entering the race.

Her late entry comes with both advantages and risks. On the one hand the Trump campaign has had to scramble and re-focus its critique on her after spending months and even more dollars targeting Mr. Biden, especially highlighting his age, and blaming his administration for alleged failures regarding the economy and job creation, and immigration. Now, Mr. Trump appears to be pivoting to a baser tenor of name-calling and race-baiting, disputing Ms. Harris's racial identity in uncharitable terms. This, ironically, cedes the high ground to Ms. Harris, potentially giving her the space to cast a broader political net and forge a more inclusive policy agenda that could rise above race politics, reinvigorate the liberal base and values of her party, and allow her to be seen as more than just the alternative candidate to Mr. Trump. The reality is that it is not only the U.S. but also the world that would stand to gain from Washington under the next President holding firm to core democratic values and genuinely working towards peace across the many troubled regions of the world, most immediately in the context of the conflict in Gaza spiralling across West Asia, and Russia's belligerence in Ukraine.

WEST-RUSSIA PRISONER SWAP: HOW PRISONERS BECOME GEOPOLITICAL PAWNS

Evan Gershkovich, a reporter at Wall Street Journal, and Paul Whelan, a former US Marine, were freed last Thursday as a part of the biggest prisoner swap between Russia and the West since the Cold War. Both had been convicted of espionage, and faced lengthy prison sentences in Russia.

— Since times immemorial, rival groups — whether they be tribes, modern nation-states, or even criminal gangs — have used prisoners as leverage against the enemy. If a rival wants them back, they have to give to the captor something valuable in return.

— There are multiple international treaties, including the 1949 Geneva Conventions, which govern the treatment and exchange of PoWs. But there is no way to enforce these rules. This



means that PoWs remain pawns in international power politics. For instance, Russia has at times held back the release of Ukrainian PoWs in its captivity to build domestic pressure against Volodymyr Zelenskyy's government in Ukraine, according to a Politico report from December 2023.

— Things are slightly different with prisoner swaps like the one from this week, in that there is no written doctrine which guides these exchanges.

— According to Article 2 (1) of the United Nations Charter, “The Organization is based on the principle of the sovereign equality of all its Members”. This includes the respect of domestic laws of each country. While the fairness of a country's legal system may be questioned — as it is all the time in international politics — at a principle level, countries can punish foreigners for breaking the law.

— Thus, the price of a prisoner's freedom varies on a case-to-case basis, depending not just on who the prisoner is, but also on what the country, which has incarcerated them, can get in return for their release.

For Your Information:

— The 1949 Geneva Conventions are a set of international treaties that ensure that warring parties conduct themselves in a humane way with non-combatants such as civilians and medical personnel, as well as with combatants no longer actively engaged in fighting, such as prisoners of war, and wounded or sick soldiers.

— All countries are signatories to the Geneva Conventions.

HAS THE U.K. CHANGED ITS STANCE ON ICC ARREST WARRANTS?

The story so far:

On July 26, Britain abandoned its intent to challenge the prosecutor's application for arrest warrants before the International Criminal Court (ICC) against Israel's Prime Minister Benjamin Netanyahu and Defence Minister Yoav Gallant. The latest move signals a second policy shift by the Labour government, from the previous Conservative government, after it restored funding for the UNRWA, the UN agency for Palestinian refugees.

What is the dispute about?

The chief prosecutor of the Hague Court, Karim Khan, on May 20, applied to the pre-trial chamber to serve arrest warrants against Hamas leaders Ismail Haniyeh and Mohammed Deif (since killed) and Yahya Sinwar, as well as Mr. Netanyahu and Mr. Gallant. The move was consequent to the brutal fallout from Hamas's Operation al-Aqsa flood on October 7, 2023, and Israel's Operation Iron Swords in retaliation. The prosecutor asserted that there were reasonable grounds to believe that all of them bore criminal responsibility for war crimes and crimes against humanity. One pointed reference in Mr. Khan's application was to Tel Aviv's alleged intentional starvation of civilians as a method of warfare, a war crime under the 1949 Geneva Conventions.

What was the U.K.'s previous stance?

The Conservative government opposed the ICC's application for arrest warrants on Israeli leaders. The former prime minister Rishi Sunak called the move “deeply unhelpful.” U.K. lawyers



maintained that the question of the Court's jurisdiction over Israeli citizens had to be ascertained before arrest warrants could be served to Mr. Netanyahu and Mr. Gallant. This was necessary, they argued, given that the state of Palestine was not allowed to exercise criminal jurisdiction over Israeli citizens under the 1993 Oslo Accords, which has been superseded by the 1998 Rome Statute.

What is the ICC jurisdiction issue?

In 2019, then chief prosecutor Fatou Bensouda deemed it fit to seek further confirmation regarding the ICC's jurisdiction in Palestine since it was an occupied territory rather than a sovereign state. On February 5, 2021, the Hague Court ruled that it could exercise criminal jurisdiction in occupied Palestinian territories, and that its reach extended to Gaza and the West Bank, including East Jerusalem. The Court also made it categorical that its jurisdiction covered crimes committed by nationals of states-parties and by nationals of non-states-parties on the territory of a country. Thus, Israel's refusal to ratify the Rome Statute is not directly relevant since the ICC prosecutes individuals and not countries, including citizens from states that are not signatories to the treaty.

Weeks after the February 2021 ruling, the ICC launched investigations into alleged war crimes in Palestinian territory, including the 2014 Gaza war and the illegal construction of settlements in the occupied territory.

What are the implications for Israel from U.K.'s current stance?

In the wake of the removal of Britain's objections to the prosecutor's actions, it may be a matter of time before the ICC issues arrest warrants against the five leaders. In that event, Prime Minister Netanyahu would earn the dubious distinction of becoming the first head of government backed by western countries to be indicted by the ICC. Such a scenario would expose Israel's allies, especially the U.S., to immense domestic opposition against the supply of arms to that country. Tel Aviv already faces charges of genocide in the International Court of Justice and would face further isolation around the world. A potential indictment would severely restrict Mr. Netanyahu's travels, with the imminent risk of being detained by any of the 124 signatory states to the ICC. Conversely, the Hague Court, already under attack for its narrow focus on investigating impunities among African countries, faces the risk of undermining its relevance should the judges decide not to proceed against Israel.

ON THE EDGE

The killings of Fuad Shukr, a senior Hezbollah commander, in Beirut, and Ismail Haniyeh, the political chief of Hamas, in Tehran, within hours on July 30 have taken West Asia to the brink of a wider war. Israel has claimed the strike on Beirut that killed Shukr, but has neither confirmed nor denied its role in the assassination of Haniyeh, a standard approach about its operations inside Iran. Israel's northern border with Lebanon has remained tense ever since the Gaza war broke out last year with Hezbollah and the Israeli Defense Forces exchanging fire. After Shukr was killed, Hezbollah leader Hassan Nasrallah said Israel had breached a red line, and the group has launched dozens of rockets over the past week, heightening the tensions. A bigger risk is the expected Iranian retaliation against Israel. When Israel bombed Iran's embassy complex in Damascus on April 1, Iran launched hundreds of drones and cruise and ballistic missiles towards Israel, most of which were shot down by a U.S.-led coalition. If Iran carried out such an attack in response to an



Israeli strike on its embassy in a third country, it is unlikely to ignore a direct Israeli attack on its capital that killed an ally who was in Tehran to attend the presidential inauguration.

To be sure, by killing Haniyeh in Tehran, Israel has demonstrated its capabilities to pull off sophisticated operations even in hostile territories and exposed Iran's security and intelligence vulnerabilities. Israel has also sent a strong message to Hamas, which carried out the October 7, 2023 attack, that none of its leaders is safe. Yet, this unchecked militarism of Prime Minister Benjamin Netanyahu could turn out to be counterproductive for Israel in the long run. It is now apparent that Mr. Netanyahu is not serious about peace. The killing of Haniyeh has come at a time when both Israel and Hamas were making progress in talks for a hostage-ceasefire deal. Haniyeh, who was living in exile in Doha, was a relatively moderate voice within Hamas who pushed for a ceasefire. By taking him out, Mr. Netanyahu is telling the world that he wants the war to continue. And, by carrying out the attack in Tehran, which is a flagrant violation of Iran's sovereignty, Mr. Netanyahu is practically challenging the Islamic Republic to retaliate. If a direct war breaks out between Israel and Iran, the U.S. could be dragged into it, which is what Israel wants. The Biden administration avoided such a disastrous outcome in April by reining in Israel after Iran's retaliation. But that did not stop Israel from launching another provocative attack against Iran, taking the region back to the brink again. As West Asia braces for Iran's retaliation, the U.S. and its allies should work together to make sure that the impact of its response on Israel would be minimal, and then put in place new rules of the game for Israel so that it does not threaten regional security again as it did on April 1 or July 30.

REIGN OF CHAOS

The first appeal to the public from Mohammad Yunus, Nobel laureate and the head of Bangladesh's interim government, after he landed in Dhaka from Paris on Thursday, was to "save the country from chaos and violence". The octogenarian pioneer of microfinance is taking charge of the country at one of its most tumultuous phases. Days after former Prime Minister and Awami League leader Sheikh Hasina resigned and left amid violent mass protests, the nation of 170 million people remains on edge as violence refuses to recede. Law enforcement officials are missing and the state bureaucracy has become non-functional in the absence of a government. Extremist sections have used the chaos to target Hindus, Ahmedis, a minority sect in Islam, and Awami League functionaries. According to the Bangladesh Hindu Buddhist Christian Unity Council, the houses and shops of minorities were looted in several districts. Offices of the Awami League were vandalised and dozens of party functionaries and supporters were killed. Mr. Yunus, who was sworn in on Thursday, condemned the violence and appealed for calm. As the banker begins his role as an administrator, his challenge would be to bring Bangladesh back from the brink and restore the rule of law.

By appointing Mr. Yunus, someone who is acceptable to the student protesters and the political opposition, the military and Bangladesh President Mohammed Shahabuddin have shown signs of reconciliation. At a time when there is much hostility among political parties, an interim government headed by a technocrat is a pragmatic first step. But Mr. Yunus does not have the political machinery to back him up and will have to be dependent on the mainstream parties or the Anti-Discrimination Student Movement. He also faces three critical medium-term challenges. First, he has to make sure that the military stays in the barracks. The military has an infamous past and it took years of mass movement, led by Ms. Hasina and Khaleda Zia, the BNP leader, to bring the dictatorship to an end in 1990. Second, Mr. Yunus has to build at least temporary peace in Bangladesh's polity. Ms. Hasina's fall has empowered the Jamaat and the BNP. Jamaat, a



majoritarian Islamist group, has had a particularly bloodied past, while the years the BNP was in power were marked by political violence and vendetta. Lastly, Mr. Yunus's administration should facilitate free and fair elections at the earliest. Only an elected government with popular legitimacy can steer the country out of the troubles it is in today. The success of Bangladesh's uprising is dependent on the will and the ability of the country's new rulers to tackle these challenges.

FROM HOPE TO DESPAIR

With her dramatic escape from Dhaka, just moments before mob arson and vandalism, ousted Bangladesh Prime Minister Sheikh Hasina will have time to pause and consider what led to this little-expected outcome. Once the hope of Bangladesh's youth, in battles for democracy, and a Prime Minister who breathed life into the Bangladeshi economy, Ms. Hasina was eventually seen as the students' greatest adversary, held responsible for over 300 deaths in protests of the past two months. While she was admired for her crackdown on terrorist camps in 2009, handing over criminals to India, and her campaign against radicalisation, Ms. Hasina was recently more reviled for using the same strong-arm tactics on her opponents. The student protests over the quotas that began in July may have been the final straw; anger was building up over the past decade, with allegations of vote rigging and the suppression of media, and sending leaders, journalists and activists to jail on trumped-up charges. Even after winning elections in January for a fourth term, Ms. Hasina continued down that path, with cases and jail terms against Nobel Laureate and Grameen Bank founder Muhammad Yunus, now tipped to head the interim government. Her actions, and refusal to give any space for dissent, have tarnished the legacy she holds most dear — that of her father, the much-beloved founder of Bangladesh, Sheikh Mujibur Rahman, whose statues now stand amidst the rubble. There is no doubt that the extreme mob violence and protests had political support, and possibly the encouragement of elements in Pakistan and the U.S., both of which had tense ties with the Awami League government. More worrying is the underlying involvement of Islamist groups that could affect the religious tolerance and secularism that Ms. Hasina tried to usher in during her 15-year tenure.

For India, each of these outcomes must be cause for introspection. New Delhi was not just complicit in Ms. Hasina's actions against Bangladeshi opposition members by failing to advise her of the repercussions. It also failed to engage them, losing goodwill on Dhaka's streets as well. The Modi government's unalloyed support for Ms. Hasina also ensured her uncritical support, forcing her to accept even unpopular decisions such as the Citizenship (Amendment) Act. While securing Ms. Hasina's safety and well-being, in a manner accorded to a leader who has always upheld India's interests, the government must not waste time in engaging with the next regime and work to assist a peaceful transition to a more inclusive process for democracy in Bangladesh.

HASINA'S PARADOXICAL RULE — ECONOMIC PROGRESS, DEMOCRATIC REGRESSION

Ms. Hasina's resignation marks a steep fall for a leader whose regime's use of measures to curb civil liberties and the opposition is in sharp contrast to its economic policies. Her government deserves credit for various economic measures such as strengthening infrastructure in the country by providing electricity to remote villages and building highways, railway lines, and ports.

The country's GDP per capita (current U.S.\$), surpassed India's in 2023. The rapid increase in the measure post-2003 is visible. The economic growth also translated to better outcomes in education and health.



The country's Human Development Index also surpassed India's in 2020 and stood just behind Sri Lanka in the region. The country's Infant Mortality rate also drastically reduced from 151.4 in 1973 (behind India) to 24.1 in 2022 (ahead of India).

In contrast to the rapid progress in socio-economic measures, the nation's indicators which measure political rights, political pluralism, civil liberties, organisational rights, rule of law, and personal autonomy have all declined in recent years.

Bangladesh's scores in such parameters over the last decade, based on ratings by Freedom House. In each category, the maximum score is four and the minimum score is one, or zero if no rights exist at all.

The 76-year-old leader became the world's longest-serving female head of government, when Ms. Hasina won a fourth consecutive term in January this year, in an election boycotted by the main Opposition who claimed the polls were not free and fair.

All indicators measuring political rights and political pluralism, such as "Was the head of government elected free and fairly?", "Are electoral laws implemented impartially?", "Is there the right to organise political parties?", and "Is there an opportunity for the opposition to gain power through polls?", have recorded a drastic decline in the past decade.

The Freedom of Press index, already poor, suffered a further drop in the second half of 2010. That protestors were met with excessive violence recently was not surprising, given that the nation's score in "freedom of assembly" declined.

Ratings also showed that people were afraid to air opinions on sensitive issues, with the independence of the judiciary taking a beating. Indeed the rule by Ms Hasina in Bangladesh can only be termed a paradox.

WHAT LED TO THE FALL OF SHEIKH HASINA?

Sheikh Hasina survived the carnage of August 15, 1975 by sheer chance. Ms. Hasina, who was then 28, happened to be abroad when almost all members of her family, including her father Sheikh Mujibur Rahman, the founding father of Bangladesh, were killed at their residence in Dhaka by a group of Army personnel. She then spent six years in exile in India. In the late 1980s, she remobilised the Awami League (AL), Mujib's party, which played a crucial role in bringing down the military dictatorship of Muhammad Ershad in 1990. Six years later, the AL, under her leadership, defeated the Bangladesh Nationalist Party (BNP) of Khaleda Zia, and Ms. Hasina became Prime Minister for the first time. She returned to power after an interregnum in 2009.

In the subsequent 15 years, Ms. Hasina oversaw economic progress in Bangladesh. The country of 170 million people saw millions being lifted out of poverty. Her government won international praise for hosting millions of Rohingya Muslim refugees who fled violence in neighbouring Myanmar. She set up a war crimes tribunal to hold those who aided the genocide of the 1970s accountable. She also won back-to-back elections, the latest victory being in January. Still everything she built came crashing like a sandcastle on August 5. The 'iron lady' of Bangladesh had to resign and leave the country. What went wrong for the most powerful Prime Minister Bangladesh had had in a generation?



Lack of political legitimacy

The trigger for the set of events that led to Ms. Hasina's downfall was an unpopular quota system for government jobs that was originally introduced by Mujib after the liberation of Bangladesh. More than 50% of government jobs in Bangladesh were reserved for different sections, of which 30% were for the descendants of freedom fighters — meaning, Awami League workers. Ms. Hasina had done away with this system in 2018 after protests. In June 2024, the old system was reinstated by the Bangladesh high court. This triggered student protests, first on university campuses.

But Ms. Hasina had another problem — lack of political legitimacy for her government. In Bangladesh, the opposition and the government have historically had a hostile relationship. Ahead of the 2018 elections, Ms. Zia, the former Prime Minister and BNP chairperson, was jailed after a corruption conviction. Leaders of Jamaat-e-Islami, the radical Islamist party, were convicted and hanged by the war crimes tribunal for their role in the genocide. Opposition leaders were routinely harassed, and legal challenges were mounted against the Prime Minister's rivals. This led to the BNP, the main opposition party, boycotting back-to-back elections. Moreover, independent analysts flagged irregularities in the election process. Thus, the space for opposition politics shrank over the years.

But for large sections of Bangladesh's population, Ms. Hasina was a force of stability, who turned around the country's economy. Bangladesh witnessed sustained economic growth, showing a jump in GDP per capita and substantial improvement in social indicators. Poverty declined from 11.8% in 2010 to 5% in 2022, based on the international poverty line of \$2.15 a day, according to the World Bank.

However, the economic story faced challenges in recent years, first after the strike of COVID-19 and then the Russia-Ukraine war. GDP growth plunged to 3.4% in 2020, from 7.9% the previous year, according to the IMF. The economy, thus, is still in recovery mode. The Ukraine war led to a spike in oil and food prices. Inflation went up to 10%, and the country now has one of the highest youth unemployment rates in South Asia — at about 20%. As the economy slowed, employment opportunities in the private sector shrank. Government jobs were seen a report of economic stability by the youth. And when the high court ordered the reinstatement of the quota system, it angered the already frustrated students. It is this anger which lit the fuse for Ms. Hasina's imminent downfall. And the opposition, which had been living under Ms. Hasina's tight grip for over 15 years, joined in.

The iron lady's mistakes

Ms. Hasina erred in understanding the depth of the students' anger. She also miscalculated the strength of her political opponents. She called the protesters 'razakars', a derogatory term which was used to refer to those who helped Pakistani troops during the 1971 liberation war. This inflamed passions. And Ms. Hasina made the mistake which authoritarian rulers always make — bank on excessive force to quell an uprising. She unleashed both police personnel and AL activists on the protesters, who were also violent. In July, some 200 people were killed, mostly protesters, in clashes.

After the first round of protests, the Bangladesh Supreme Court scaled back the quota system, setting the reservation cap for the descendants of freedom fighters at 5%. While the students had won a major victory, they were not ready to call off the protests. On August 4, they called for another round of protests with a new demand — Sheikh Hasina should go. They also demanded



accountability for the deaths of over 200 of their comrades. The AL then called for a counter-mobilisation of its members.

Dhaka, a megacity of 10 million people, was set for a major showdown. More than 100 people were killed in the ensuing violence in a single day. The government curbed access to communication networks and ordered a curfew. Students urged for more protests on August 5.

By that time it was evident that Ms. Hasina's position had been substantially weakened. The military said it would guard its constitutional obligations but won't use force against protesters. According to a Reuters report, Army chief Waker-uz-Zaman, after holding a meeting with senior Generals, informed the Prime Minister the night before she quit that his soldiers would not be able to enforce the curfew she had called for. Ms. Hasina's fate was sealed.

In the afternoon on August 5, when protesters started moving towards her official residence, the Awami League leader who was in power for 15 years resigned and left the country for India.

Chaos or order?

Ms. Hasina is the second leader in South Asia who has now been forced out of power by mass protests.

In July 2022, Sri Lanka's elected President Gotabaya Rajapaksa was forced to resign and leave the country amid massive protests triggered by an economic meltdown. The island country, however, saw an orderly political transition. The country's political class backed Ranil Wickremesinghe, a former Prime Minister, as the new President. Sri Lanka is now preparing for a Presidential election later this year, even though the country is yet to recover from the economic crisis.

But the situation in Bangladesh looks gloomier. The Army chief has announced an interim government, which is to be headed by Nobel Laureate Muhammad Yunus, a key demand from the students. The President has dissolved parliament. The BNP has demanded elections in three months. However, it is not clear what role the Army, which had in the past directly ruled the country, would play during the transition. The interim administration would also find it difficult to bring in order after the chaos of the past month. There are already reports of widespread violence against Hindus, Ahmedia Muslims and AL functionaries.

Bangladesh's polity stands broken.

Ms. Hasina may be out of Bangladesh, but the AL still has a presence in the country. Moreover, the economic woes are looming large over the next government. Bangladesh definitely has some tough days ahead.

THE PARTY OF THE STATE

When India proceeded to hold its first general election in 1951-52, Pakistan witnessed a different set of landmark developments. On January 27, 1952, Pakistan Prime Minister Khawaja Nazimuddin declared that, as envisaged by Mohammed Ali Jinnah, Urdu would be the only state language of Pakistan.

This rocked the campuses of East Pakistan. In the subsequent crackdown, Salam, Barkat, Rafique, Jabbar, Shafiur, Abdul Awal and Ohiullah became the the 'language martyrs'. The leader of the movement was Sheikh Mujibur Rahman, who was at that time in prison. On July 9, 1953, Mujib was elected as the general secretary of the East Pakistan Awami Muslim League.

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The language movement, under the Awami Muslim League, tried to draw pro-Pakistan Shaheed Suhrawardy, A.K. Fazlul Huq and leftist Maulana Bhashani into a coalition. A Jukta Front, or United Front, was formed on November 14, 1953. In the first legislative assembly election of East Pakistan, held on March 10, 1954, the United Front won 223 seats out of 237. It was the first major electoral victory of the Awami Muslim League, which won 143 seats.

The future ruling party of free Bangladesh, which has been in news over the past few weeks because of a government crackdown on students protesting against a system of job quota in public employment, was not born as a mainstream Indian nationalist or pro-Pakistan political party as the leading political formations before 1947 were mostly.

The Awami League came at a time when the major leaders of Bengal politics had either joined the pro-Pakistan wave or were left on the margins. The Awami League started from the university campuses of Dhaka and Calcutta as the students realised early on that the idea of Pakistan was going to fail sooner or later, says Iqbal Hasan Mahmud Tuku, a leader from the opposition Bangladesh Nationalist Party. Mr. Tuku, who started his political journey as a supporter of the leftist student movement under Maulana Bhashani, says the Awami League started as a protest movement and it remained so for many years before coming close to power in the 1970 national election in Pakistan.

Secular platform

From the beginning, the Awami League had been staunchly secular in contrast to the culturally tilted identity of the Muslim League. To emphasise its political break from the Muslim League, the Awami Muslim League dropped the 'Muslim' from its name during a special council meeting on October 21, 1955.

From 1955 to 1969, the AL remained a party driven by student activists and educated professionals of East Pakistan. On January 5, 1969, the Central Students' Action Council was formed for campaigning for the autonomy of East Pakistan. Next year, in the backdrop of the devastating cyclone Bhola, Pakistan held another election in which the AL secured 167 of the 169 National Assembly seats in East Pakistan and won 288 out of the 300 seats in the Provincial Assembly.

The country witnessed as a stalemate as there was no consensus on government formation between Zulfikar Ali Bhutto, leader of the Pakistan People's Party, the majority party in West Pakistan, and Sheikh Mujib. The AL leader was later arrested, and there was a massive crackdown on his supporters, triggering a crisis and flight of refugees from East Pakistan, which eventually led to the India-Pakistan war of December 1971.

The defeat of the Pakistani military in the war and emergence of an independent Bangladesh brought the next phase of the AL. Mujib was released on January 8, 1972 and returned to Dhaka.

It was the first time that the AL tasted power. It consolidated its gains by legislative and administrative moves, and sought to strike a balance between the Islamic tradition and modernity. In 1973, the first major election of Bangladesh, the AL joined hands with the Communist Party and the National Awami Party (NAP), and won 293 seats out of 300.

Political discontent

The AL had become the establishment in the new country but it found the challenges of unemployment, food scarcity and lack of political cohesion as overwhelming. On January 25, 1973,

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



the AL took a fateful turn when Mujib formed the single party system in Dhaka named Bangladesh Krishak Shramik Awami League. Bangladesh witnessed some improvement in the economic situation in the following years, but political discontent exploded soon. On August 15, 1975, Mujib and 15 members of his family were killed by a rogue military unit.

The rise and rule of the AL was stopped temporarily as the country was ruled by General Ziaur Rahman and his Bangladesh Nationalist Party till he was assassinated on May 30, 1981, setting the country up for nearly a decade of military rule of Gen. Hossein Mohammed Ershad.

The AL was out of power during the subsequent nearly two decades but the idea of liberation that it represented remained strong. Mujib's daughter, Sheikh Hasina, who had returned to Bangladesh in the early 1980s after six years of life in exile in Europe and India, launched a public movement, in coordination with Khaleda Zia, the widow of Ziaur Rahman, and deposed the Ershad regime in 1990. Just like the 1970's cyclone, the year 1991 also saw a devastating cyclone. Ms. Zia came to power in March 1991 and in April, the cyclone exposed her government's ineptitude in handling disasters.

Ms. Hasina, who launched an anti-government movement after the cyclone hit the country, came to power for the first time in 1996, riding the anti-government sentiment.

The AL's support base was revived because of the extraordinary energy that Ms. Hasina displayed in the early 1990s, first in deposing Gen. Ershad and then in voting out Ms. Zia. Over the past five terms, out of which four terms were consecutive, Ms. Hasina has maintained a tight grip on the state, and strengthened a generation of young student leaders whom she brought to the party.

The latest protest is perhaps indicative of a new break in the history and the huge challenge the Awami League is facing. The protests, in which more than 200 people were killed, were apparently not triggered by the forces of tradition and orthodoxy that the AL had fought throughout its journey. The new adversary appears to be a progressive force — the students who have got wind beneath their wings.

FROM PIONEERING MICROFINANCE TO HEADING BANGLADESH'S INTERIM GOVT: STORY OF NOBEL LAUREATE MUHAMMAD YUNUS

In 2009, Muhammad Yunus said at The Indian Express Idea Exchange that he had recently refused an invitation to head a caretaker government [during 2006-09 when there was no elected government in Bangladesh].

He had, however, allowed himself to be persuaded to float a political party. It had not worked out. Yunus said: "The people I wanted, didn't want to join me and the people who were surrounding me, I didn't want them."

A decade and a half later, the 84-year-old "father of microfinance" took oath as Chief Adviser to the interim government of Bangladesh — presumably on his own terms. The young protesters who had brought down Sheikh Hasina's 15-year regime wanted him to take charge of the country.

The microfinance idea

Yunus got his PhD in economics from Vanderbilt University in 1971, the year Bangladesh was born. During the Liberation War, he worked with civil society in the US to build support for Bangladesh's freedom from Pakistan.



After returning to his country, Yunus worked briefly at the Planning Commission before joining Chittagong University as head of the economics department. It is here that he developed his ideas about microfinance.

“In 1974, I found it difficult to teach elegant theories of economics in the university classroom, in the backdrop of a terrible famine in Bangladesh. I felt the emptiness of those theories in the face of crushing hunger and poverty,” he said in his Nobel acceptance speech in 2006.

He recalled his meeting with a poor woman who had borrowed less than a dollar from the local moneylender on the condition that he would have the exclusive right to buy all her produce at a price decided by him. It was “slave labour”, Yunus said.

He found 42 such “victims” who together owed the moneylender about \$27, and cleared their debts with his own money. And thus were sown the seeds of what would later become Grameen Bank.

“If I could make so many people so happy with such a tiny amount of money, why not do more of it?” he said.

The Grameen Bank story

In 1976, Grameen Bank was launched as a research project in a village in Chittagong. It became a full-fledged bank in 1983, aiming to provide collateral-free, low-interest credit to the poor, women, and socially and economically marginalised sections. Loans were disbursed to groups of borrowers, with the whole group acting as co-guarantors.

As of June 2024, Grameen Bank operates in 81,678 (around 94%) of villages in Bangladesh, serving almost 45 million people through 10.61 million borrower members, 97% of whom are women. Since its inception, the bank has disbursed \$38.66 billion in housing, student, micro-enterprise, and other loans, and has a recovery rate of more than 96%, according to figures on its website.

The Grameen initiative has spread beyond microfinance, and today has a number of for-profit and nonprofit ventures, targeted at the rural poor in sectors ranging from fisheries to software, education to telecom, FMCG to energy. Yunus is seen as a pioneer for “social businesses”.

The Grameen Bank model has been replicated across the developing world as a way to operate sustainable development initiatives with women at their centre. “Poor people are like bonsai trees... Society never gave them the base to grow on. All it needs to get poor people out of poverty is for us to create an enabling environment for them,” Yunus said in 2006.

Criticism of microcredit

But this model has its critics. Several economists say microfinance traps the poor in a cycle of debt from which they struggle to get out. In the end, all the negatives of traditional lending afflict microfinance too, from aggressive debt collection tactics to high interest rates.

Yunus has countered that the problem does not lie with his model. “The concept of microcredit was abused by some and turned into profit-making enterprises... I felt terrible that microcredit took this wrong turn,” he told Bloomberg in 2022.



Hasina, Yunus, and after

Among Yunus's harshest critics was Sheikh Hasina, who frequently accused him of "sucking blood from the poor". Some of her anger was likely personal — and went back to Yunus's plan to float his own political party in 2007.

Yunus had declared his intention just as the military started a crackdown on political parties, arresting many top leaders for alleged corruption. Hasina herself would be put in jail. She apparently never forgave Yunus for what she saw as a ploy to remove her from politics, striking when she was down. Yunus has always denied these allegations.

Many believe Hasina also saw Yunus's post Nobel Prize popularity in Bangladesh — rivalling, if not surpassing, her own — as a threat.

After assuming charge in 2009, Hasina launched a series of investigations into Yunus and his Grameen group. She accused Yunus of forcefully recovering loans from poor rural women. In 2011, Yunus was unceremoniously removed as managing director of Grameen Bank on the pretext that he had exceeded the mandatory age of retirement.

A number of other cases followed — all of which, Yunus and his supporters say, were politically motivated. In 2013, he was put on trial for receiving money — including his Nobel Prize and royalties from a book — without permission from the government.

In all, over a period of 10 years of Hasina's rule, 174 cases were filed against Yunus — including for violation of labour laws, money laundering, and corruption — the Bangladeshi English daily New Age reported in September 2023.

In January this year, he was sentenced to six months in prison for labour law violations. This conviction was overturned earlier this week, Reuters reported. In June he was indicted on embezzlement charges in a separate case.

It is unclear how all these legal cases will proceed, now that Hasina is out of power and Yunus is the head of the government.

What comes next

A difficult road lies ahead for Yunus. Following Hasina's ouster, Bangladesh has seen a spate of attacks on minorities, and escalating sectarian tensions. In his first comments after arriving in Dhaka from abroad, Yunus described Bangladesh as a "family" and said the first task was to reunite it.

Also, the interim government is guaranteed by the Bangladesh Army, and Yunus effectively operates on the mercy of the generals who ultimately forced Hasina out. The student protesters who rooted for him can be expected to be impatient for him to deliver quickly — however, many of the issues underlying the protests are too complicated for quickfixes.

BEFORE MUHAMMAD YUNUS, NOBEL LAUREATES WHO WENT ON TO LEAD THEIR COUNTRY

Economist Muhammad Yunus, who won the Nobel Peace Prize in 2006, arrived in Dhaka earlier today. He is set to take oath as the head of Bangladesh's interim government at around 8 pm today.



Yunus, however, will not be the first Nobel laureate to later lead their country. Five others have preceded him.

Lester B Pearson (1897-1972)

Pearson was the Canadian prime minister from 1963 to 1968, and a leader of the Liberal Party. Despite running a minority government, he introduced a national pension plan, a family assistance program, broadened old-age security benefits, and laid the groundwork for universal healthcare in Canada. Pearson won the Nobel Peace Prize in 1957, for his role in resolving the Suez Crisis.

On July 26, 1956, Egypt President Gamal Abdel Nasser nationalised the Suez canal, which had till then been under the French and British-owned Suez Canal Company. Given the canal's strategic importance as a connection between Europe and Asia, Nasser's decision sparked international tensions, with Britain, France, and Israel eventually launching a military response to secure the canal.

A career diplomat, Pearson was Canada's foreign minister and headed the country's delegation to the United Nations when the crisis broke out. Initially, he worked towards a diplomatic solution to resolve the issue, but after hostilities commenced in October, he came up with the idea of the UN's first large-scale peacekeeping force. After US pressure forced a ceasefire in November, Pearson's solution allowed the aggressors to withdraw their forces appearing to have been defeated. Pearson's Nobel selection committee credited him for "saving the world".

02 Lech Wałęsa, Poland

Lech Walesa Lech Walesa (born 1943)

Wałęsa served as Poland's president from 1990-95, the first since 1926 to be democratically elected. An anti-communist dissident, he was a shipyard electrician who founded and led the Solidarity trade union, which in 1989 brought an end to communist rule in Poland. He won the Nobel Peace Prize in 1983 "for non-violent struggle for free trade unions and human rights in Poland".

Since he began working at the Gdansk shipyard in 1967, Wałęsa was heavily involved in worker activism. He and other likeminded activists, in the 1970s, were frequently detained and under constant government surveillance for organising non-communist, anti-government trade unions. In August 1980 Wałęsa led the Gdansk shipyard strike. This in turn sparked strikes across much of the country with Wałęsa as the leader. The authorities eventually capitulated, and on August 31, the path breaking Gdansk Agreement was signed, giving workers the right to strike and to organise their own independent union.

However, in 1981, Wałęsa's Solidarity union was banned, and Wałęsa arrested. He was released in 1982, but remained under strict surveillance. Nonetheless, he kept on his activism, which continued to pressure the unpopular communist government. Eventually, as the Soviet Union weakened, the Polish government agreed to negotiate with Wałęsa and free elections were held in 1990.



03 Aung San Suu Kyi, Myanmar

Aung San Suu Kyi Aung San Suu Kyi (born 1945)

Suu Kyi served as the State Counsellor of Myanmar, the de-facto head of the government equivalent to a prime minister, 2016 to 2021 after leading Myanmar's transition from military rule to partial democracy in the 2010s (progress which has since been reversed). She had won the Nobel Peace Prize in 1991 "for her non-violent struggle for democracy and human rights" in Myanmar. Suu Kyi rose to prominence during the uprising of 1988, when she founded the anti-junta National League for Democracy. In the 1990 elections, NLD won 81% of the seats in Parliament, but the junta refused to hand over power, leading to an international outcry about the situation in Myanmar. Suu Kyi herself was detained before the elections, and remained under house arrest for almost 15 years between 1989 and 2010. This made her one of the world's most prominent political prisoners, and an icon for democracy in the Global South. After coming to power in 2015, Suu Kyi received widespread condemnation for her tacit support to the persecution and ethnic cleansing of the Rohingya people in Myanmar's Rakhine state. In 2021, she was arrested after a coup restored military rule in Myanmar. She is serving a 27 year prison sentence on various graft charges.

04 Nelson Mandela, South Africa

Nelson Mandela

Nelson Mandela (1918-2013)

Mandela served as the president of South Africa from 1994 to 1999. He was the first Black president of the country, elected in its first ever multi-racial elections. He was awarded the Nobel Peace Prize in 1993, jointly with then President Frederik Willem de Klerk, "for their work for the peaceful termination of the apartheid regime, and for laying the foundations for a new democratic South Africa".

Mandela joined the African National Congress in 1943, and subsequently became active in fighting the policy of racial segregation in South Africa, formally introduced by the Nationalist Party in 1958. He was repeatedly arrested for seditious activities and was unsuccessfully prosecuted in the 1956 Treason Trial.

He would eventually be arrested and sentenced to life in prison in 1962 for conspiring to overthrow the government. He would spend the next 27 years in prison. During this time he rose to international fame as a symbol of resistance against the anti-apartheid movement. As international pressure grew to end apartheid, and fears of a racial civil war in South Africa became ever so pressing, de Klerk released Mandela in 1990. Over the next four years, the two negotiated a peaceful end to apartheid.

05 José Ramos-Horta, East Timor

Jose Ramos Horta Jose Ramos Horta (born 1949)

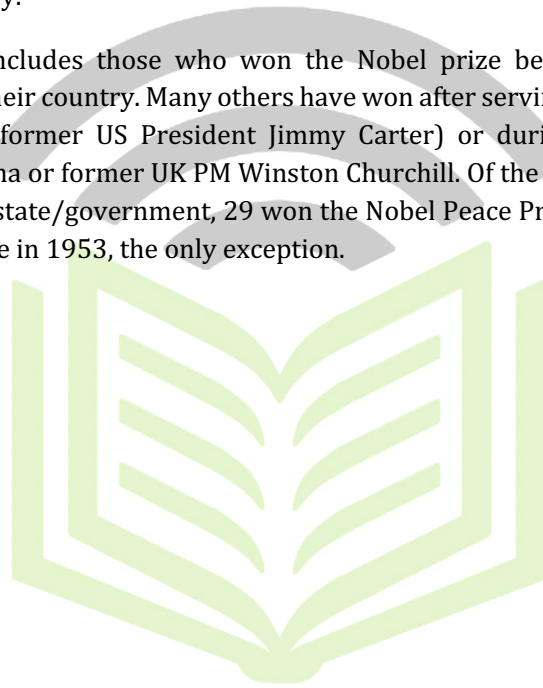
Ramos-Horta has been the president of East Timor since 2022. He previously held the position from 2007 to 2012, and the prime ministership from 2006 to 2007. He won the Nobel Peace Prize in 1996 along with Carlos Filipe Ximenes Belo, for working "towards a just and peaceful solution to the conflict in East Timor".



The island of Timor sits just north of Australia, and to the southeast of the Indonesian island of Sulawesi. During the colonial era, the Dutch and the Portuguese split the island in half. The western part of the island went to Indonesia after the Dutch formally recognised Indonesian independence in 1949. The Portuguese would administer East Timor till 1975. However, at the end of Portuguese rule, Indonesia occupied the whole island.

Thus began a resistance movement to free East Timor, and a conflict which went on for the next 20 years. José Ramos-Horta was one of the leaders of the resistance who went around the world pleading for the cause of East Timorese independence. In 1992 he presented a peace plan which eventually laid the foundation for Indonesian withdrawal from East Timor, and its people's self-determination. In 2002, East Timor, also known as Timor-Leste, became the first new sovereign state of the 21st century.

Note: This list only includes those who won the Nobel prize before becoming the head of state/government of their country. Many others have won after serving their terms (former Israel PM Shimon Peres or former US President Jimmy Carter) or during their terms (former US President Barack Obama or former UK PM Winston Churchill). Of the 30 Nobel recipients to serve as a country's head of state/government, 29 won the Nobel Peace Prize with Churchill, who won the Nobel for Literature in 1953, the only exception.



DreamIAS



NATION

PRESIDENT MURMU IN FIJI: 'INDIA TO PUSH FOR CLIMATE JUSTICE FOR OCEAN STATES'

As a voice of the Global South, India will push the developed countries for climate justice for Fiji and other ocean states, said President Droupadi Murmu during her address to the Fijian parliament on Tuesday.

EAM REACHES MALDIVES ON A 3-DAY VISIT, MEETS COUNTERPART

In the first high-level visit to Maldives since President Mohamed Muizzu came to power, External Affairs Minister S Jaishankar on Friday met Maldives Foreign minister Moosa Zameer in Male to discuss all areas of bilateral cooperation to deepen the partnership.

— “Maldives is one of the cornerstones of our ‘Neighborhood First’ policy, it is also one of our Vision SAGAR, as well as of our commitment to the Global South...” Jaishankar said on Friday.

— Jaishankar said Maldives occupies an important place in India’s vision of ‘Neighbourhood First’ and that he was looking forward to “fruitful engagements” with the leadership of the Maldives.

— The ties between India and the Maldives came under severe strain since Muizzu, known for his pro-China leanings, took charge of the top office in November 2023.

— He had demanded the withdrawal of Indian military personnel from his country. Subsequently, the Indian military personnel were replaced by civilians by May 10, the mutually agreed date.

For Your Information:

— India has been a significant contributor to Maldives’ tourism industry for many years, especially during the pandemic. Currently, it ranks sixth in our top 10 markets this year. The top market for the Maldives currently is China.

— India and Maldives have signed an agreement to introduce the Unified Payments Interface in the archipelago nation, which will have a “very positive” impact on its tourism sector, External Affairs Minister S Jaishankar has said.

CJI-LED BENCH EXPUNGES HC JUDGE’S REMARKS AGAINST SC

A Bench led by Chief Justice of India D.Y. Chandrachud and four senior-most judges of the Supreme Court held a special sitting on Wednesday to expunge the remarks made by a High Court judge challenging the Supreme Court’s position at the top of the judicial hierarchy.

A video capturing the comments by Justice Rajbir Sehrawat of Punjab and Haryana High Court, in court, was widely circulated on social media, compelling the CJI to urge judges to exercise restraint and responsibility while making observations in the course of court proceedings.

The CJI said livestreaming of court sessions was meant to provide citizens access to judicial proceedings, and not for judges to make unwarranted observations, lowering the dignity of the judicial system.



Chief Justice Chandrachud said the top court had been pained by the observations made by Justice Sehrawat and had decided to take suo motu cognisance. The other judges on the Bench were Justices Sanjiv Khanna, B.R. Gavai, Surya Kant, and Hrishikesh Roy.

Although Attorney-General R. Venkataramani and Solicitor-General Tushar Mehta termed Justice Sehrawat's observations "serious transgressions" on judicial discipline, and even "aggravated contempt" of the SC, the Bench decided in favour of restraint.

The Chief Justice said that unlike aberrations such as this, an overwhelming majority of High Court judges worked with greater responsibility.

Justice Sehrawat had taken offence to the top court staying an earlier order of his in a case. On July 17, he blamed the apex court for "presuming itself to be more 'supreme' than it actually is and the High Court to be less 'high' than it constitutionally is".

The CJI termed Justice Sehrawat's remarks "gratuitous".

SC BAIL TO SISODIA: NO POSSIBILITY OF TRIAL CONCLUDING IN NEAR FUTURE

The Supreme Court granted bail Friday to former Delhi Deputy Chief Minister Manish Sisodia in the CBI and ED cases against him for his alleged role in the Delhi excise policy matter, saying "there is not even the remotest possibility of the trial being concluded in the near future".

— "In our view, keeping the appellant behind the bars for an unlimited period of time in the hope of speedy completion of trial would deprive his fundamental right to liberty under Article 21 of the Constitution. As observed time and again, prolonged incarceration before being pronounced guilty of an offence should not be permitted to become punishment without trial," the bench said.

— Section 45 of the Prevention of Money Laundering Act, 2005 prescribes a rather high bar for granting bail. The negative language in the provision itself shows that bail is not the rule but the exception under PMLA and both trial and constitutional courts are required to apply a 'triple test' to grant bail.

— These three conditions are: (i) that there are "reasonable grounds for believing that (the accused) is not guilty of such offence"; (ii) that "he is not likely to commit any offence while on bail"; and (iii) that the accused is not a flight risk.

For Your Information:

— Menaka Guruswamy writes: "This judgment is notable for three reasons. First, it reaffirms and reminds all courts in the country of the age-old principle that bail is the norm and jail, the exception.

— "Second, the right to speedy trial must be respected and that keeping an accused behind bars for an unlimited period of time while awaiting trial violates his or her right to life under Article 21 of the Constitution."

— "Finally, the right to bail in cases of delay coupled with incarceration for a long period should be read into the bail provisions of the Code of Criminal Procedure, 1972 (CrPC) and the Prevention of Money Laundering Act, 2002 (PMLA)."



— “The Sisodia judgment will go a long way in protecting the rights to life and liberty guaranteed by our Constitution. It reasserts that cardinal principle that is the backbone of the criminal justice system — bail is the norm and jail the exception.”

UNDER OVERLORDS

The Supreme Court of India’s verdict holding that the Lieutenant Governor (L-G) of Delhi exercises independent authority while appointing aldermen to the Delhi Municipal Corporation, underscores the utter vulnerability of the elected Government of the National Capital Territory of Delhi to central overlordship. The judgment by a three-judge Bench rightly relies on the letter of the law governing Centre-Delhi government relations, as well as earlier judgments that sought to strike a balance between the elected regime and the appointed administrator. The final outcome of the latest round of litigation is not surprising, given that Delhi is a Union Territory, but it raises questions about the relevance of having an elected Assembly for Delhi. The Court held that the Lt. Governor’s power to appoint persons with special knowledge in municipal administration is his statutory duty, and is not one that he should exercise on the basis of advice from Delhi’s Council of Ministers. The power is an exception to the constitutional provision that says the L-G is bound by the aid and advice of Delhi’s Council of Ministers on all matters in the State and Concurrent Lists, except for the subjects of public order, police and land. The Court has rejected the Delhi government’s argument that municipal administration, being a State subject, the L-G could not have acted on his own.

Tracing the nature of the appointing power to the Delhi Municipal Corporation Act, 1957, as amended in 1993, a law enacted by Parliament, the Court noted that the Act identifies different authorities, each with distinct roles. While the Administrator was empowered to nominate 10 persons with special knowledge, the Speaker could nominate some legislators to serve on the Corporation by rotation. And that this showed that it was an independent statutory power. A Constitution Bench had sought in 2018 to lay down a framework to avoid escalation of issues arising from differences of opinion between the L-G and the Chief Minister. Such differences, as well as political acrimony between the ruling Bharatiya Janata Party at the Centre and the Aam Aadmi Party in Delhi, have been the principal driving force behind multiple conflicts and legal tussles over governing Delhi. However, in the ultimate analysis, it is the Centre that enjoys the final say. As the latest verdict on aldermen shows, the Constitution allows Parliament power to enact laws in respect of any matter on which the Delhi Assembly has jurisdiction, unlike other States which have an exclusive legislative domain. Parliament can also amend or supersede any law made by the Delhi Assembly. As legislative and executive powers are coextensive, this effectively means that the Delhi government can be undermined in any way the Centre wants.

WHY DID COURTS REVISIT BAR ON SUB-QUOTAS?

The story so far:

A seven-judge Bench of the Supreme Court has ruled that States have the power to sub-divide Scheduled Castes (SC) into groups so that it can give sub-quotas within the quota for Dalits. In the process, the Bench overruled a 2004 judgment by a five-member Constitution Bench that said such sub-classification was impermissible as Parliament alone was empowered to modify the list of SCs notified by the President under Article 341 of the Constitution.



What was the 2004 judgment?

The Andhra Pradesh Scheduled Castes (Rationalisation of Reservation) Ordinance, 1999, and the Act that replaced it created four groups — A, B, C and D — of Scheduled Castes and earmarked varying percentages of reservation for each group. The rationale was that there were differences in the level of advancement among communities under the SC list and that such sub-classification will ensure representation for the weaker castes. The Andhra Pradesh High Court rejected the challenge against the Act.

However, in the Supreme Court, a Constitution Bench of five judges held the sub-classification was unconstitutional. The November 2004 judgment in *E.V. Chinnaiah vs State of Andhra Pradesh* noted that under Article 341 of the Constitution, the President notifies the list of Scheduled Castes. Once the list is notified, it shall not be modified through another notification, and the only way to include or exclude a community in that list was by an act of Parliament. The Bench then ruled that once enumerated under Article 341, SCs constitute a single homogeneous class, and that State legislatures were not competent to tinker with the list by further classifying them into groups.

How did it come up before a larger Bench?

The Punjab Scheduled Castes and Backward Classes (Reservation in Services) Act, 2006, provided for 25% reservation for SCs and 12% for backward classes in direct recruitment to services. Half the jobs under the SC quota, the law said, would be given as first preference to Balmikis and Mazhabi Sikhs, if candidates were available. When this was challenged, the Punjab and Haryana High Court cited the judgment in *E.V. Chinnaiah* to hold that the relevant section on preference to two communities among SCs was unconstitutional. Similarly, in 2006, the High Court also struck down the Haryana government's notification dividing SC communities into two blocks and earmarking 50% of the SC quota to each block.

In 2009, the Tamil Nadu Assembly enacted a law to provide a sub-quota in services and educational institutions for Arunthathiyars, a group of sub-castes considered the weakest among the Scheduled Castes in the State. This was challenged directly in the Supreme Court. In 2020, a Constitution Bench doubted the correctness of the *Chinnaiah* judgment, noting that the nine-judge Bench in *Indra Sawhney* (1992) had permitted sub-classification of backward classes. However, in *Chinnaiah*, the Bench had declined to use that as a precedent for sub-division of SC communities as *Indra Sawhney* was only concerned with OBC reservation. Hence, a larger Bench was constituted to revisit the earlier verdict.

What is the reasoning behind it?

Six of the seven judges have now ruled that the 2004 judgment was wrong. In his judgment on behalf of himself and Justice Manoj Mishra, Chief Justice D.Y. Chandrachud has held that SC communities are not a homogeneous class as ruled in the earlier judgment. He disagreed with the view that the act of notifying a list of SCs creates a deemed fiction that all of them have a similar status. It is true that they get a common constitutional identity as Scheduled Castes based on their experience of untouchability and discrimination, but this does not mean that there is no heterogeneity among them.

He cited historical and empirical evidence to show that there were inter se differences among SC communities. There were even instances of some sections of SCs being discriminated against by other SC communities. Therefore, sub-classification was permissible, but it should be based on an "intelligible differentia" (a clear characteristic that will mark one group as different from another)



and should have a rational nexus to the purpose of doing it. Further, such sub-classification is subject to judicial review, and the State should be able to justify it using empirical data.

The CJI also held that sub-classification will not in any way amount to tinkering with the Presidential list and that it will not violate Article 341, which confers the power to notify Scheduled Castes exclusively on the President. The function of Article 341 was to identify who came under the category of Scheduled Castes, but States are free to identify those with different degrees of backwardness and make special provisions or extend reservation benefits to them. The new ruling is expected to encourage States to earmark sub-quotas for the most marginalised sections of Dalits who have not enjoyed the fruits of reservation so far.

In her dissent, Justice Bela Trivedi stands by the Chinnaiyah doctrine that it is impermissible to sub-classify a homogeneous class and that it would amount to tinkering with the President's list under Article 341.

What about creamy layer exclusion?

The creamy layer concept is now applicable only to OBCs and so far has not been extended to Dalit communities. Justice B. R. Gavai, in a separate opinion in which he concurs with the Chief Justice, has written in detail about the need for identifying the more advanced among the Scheduled Castes and excluding them from the benefits of affirmative action.

Noting that equality would mean that unequals cannot be treated as equals, Justice Gavai has wondered whether the children of IAS or IPS officers could be treated the same way as children in remote villages even though they may belong to the same community. Underscoring the differences in access and resources to those in urban and rural areas, and those attending elite institutions and those in schools with limited facilities, he has said putting them in the same bracket would obliterate the equality principle. However, he also notes that the parameters for excluding the creamy layer for the SCs cannot be the same as those used to identify the well-off among the OBCs. Three other judges have agreed with his view. However, the opinions do not constitute a direction to the government to implement the creamy layer concept, as the issue did not directly arise in this case.

Days after the Supreme Court called for exclusion of the creamy layer from the ambit of Scheduled Caste/Scheduled Tribe reservation, the Union Cabinet Friday turned it down, saying "there is no provision for a creamy layer in SC/ST reservation" in "the Constitution given by B R Ambedkar".

SC TO EXAMINE ACQUITTED MAN'S 'RIGHT TO BE FORGOTTEN': WHAT IS THE RIGHT, AND HOW HAVE COURTS RULED EARLIER?

Last week, the Supreme Court agreed to hear a case whose outcome will likely shape the contours of the "right to be forgotten", known in European information privacy regulation as the "right to erasure", in India. The top court now has to decide whether the right to be forgotten is a fundamental right and, if so, how it relates to other fundamental rights guaranteed by the Constitution of India.

A three-judge Bench headed by Chief Justice of India (CJI) D Y Chandrachud will hear a challenge against a Madras High Court ruling that on February 27 directed legal search portal Indian Kanoon to take down a judgment in a 2014 rape and cheating case. The acquitted man had moved the Madras HC in 2021, saying that he had been denied the citizenship of Australia because his name appears in the judgment that is publicly available on the legal portal.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



What is the right to be forgotten?

The right to be forgotten can be loosely described as the right to remove one's digital footprint (from Internet searches, etc.) where it violates the right to privacy. In May 2014, the Luxembourg-based Court of Justice of the European Union (CJEU), the highest court in matters concerning the application and interpretation of EU law, affirmed that there exists a right to be forgotten.

In what is commonly referred to as the "Google Spain case", the court ruled on the plea of Spanish lawyer Mario Costeja González to have Google remove information from 1998 regarding the forced sale of his property due to social security debt.

Citing Articles 7 (respect for private and family life) and 8 (protection of personal data) of the EU Charter on Fundamental Rights, the CJEU ruled that search engines must cater to individual requests to remove data that "appear to be inadequate, irrelevant or no longer relevant or excessive in the light of the time that had elapsed".

Informational self-determination — an individual's right to control and limit her personal information — is now widely recognised in EU law. Article 17 of the EU's General Data Protection Regulation (GDPR) describes the right to erasure. From victims of so-called "revenge porn" to individuals whose personal cases are on the Internet, the right to be forgotten is a crucial remedy.

How is the right interpreted in India?

In India, there is no statutory framework that prescribes the right to be forgotten. However, not all constitutional rights need to be written in black and white. Until the 2017 judgment in Justice K S Puttaswamy v Union of India — in which the apex court explicitly recognised the right to privacy as a fundamental right, placing it as a facet of the right to life, right to equality, and the right to freedom of speech and expression — there were also questions on the right to privacy.

A concurring opinion in the Puttaswamy ruling by Justice S K Kaul mentions the right to be forgotten. Justice Kaul said that this right "does not mean that all aspects of earlier existence are to be obliterated... It would only mean that an individual who is no longer desirous of his personal data to be processed or stored, should be able to remove it from the system where the personal data/ information is no longer necessary, relevant, or is incorrect and serves no legitimate interest".

Justice Kaul also gave a list of valid justifications for the right to be forgotten to be violated. These included "exercising the right of freedom of expression and information, for compliance with legal obligations, for the performance of a task carried out in public interest, on the grounds [of]... public health, for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes, or for the establishment, exercise or defence of legal claims".

How have courts ruled on the issue?

In several isolated pleas, mostly asking the court's permission to take down information in court rulings, courts have passed orders with regard to this right.

In the landmark 1994 ruling in Rajagopal vs. State of Tamil Nadu, the SC had talked about a "right to be let alone".

"A citizen has a right to safeguard the privacy of his own, his family, marriage, procreation, motherhood, child-bearing and education among other matters. None can publish anything



concerning the above matters without his consent whether truthful or otherwise..." the SC had said. But the ruling drew a distinction between the right to be let alone and the publication of public records, such as court decisions. "This is for the reason that once a matter becomes a matter of public record, the right to privacy no longer subsists and it becomes a legitimate subject for comment by press and media among others," the two-judge Bench had held.

More recently, several High Courts have passed rulings that often conflict with one another.

In *Dharamraj Bhanushankar Dave vs State Of Gujarat (2017)*, the petitioner had asked the Gujarat HC to remove details of his acquittal in a murder and kidnapping case, saying that it had come up during background checks while he was applying for an Australian visa. The court refused to grant him relief, holding that court orders are allowed to be in public domain.

However, in *[Name Redacted] vs The Registrar General*, the Karnataka HC in 2017 ensured that the name of the petitioner would be protected in an annulment case. Although the court did not substantially engage with jurisprudence on the right to be forgotten, it said that the ruling is in keeping "with the trend in the Western countries where they follow this as a matter of rule...in sensitive cases involving women in general...".

In 2021, the Delhi HC extended the right to be forgotten to even a criminal case by allowing a ruling involving *Jorawar Singh Mundy*, an American law student, to be taken down from search results. Mundy was acquitted in a customs case involving narcotics. The HC cited "the irreparable prejudice which may be caused to the Petitioner, his social life and his career prospects" as reason for taking down the details of the case.

The Orissa HC in 2020, while hearing a criminal case which involved "revenge porn", said that the legal possibilities of being forgotten "online or offline cries for a widespread debate".

"It is also an undeniable fact that the implementation of the right to be forgotten is a thorny issue in terms of practicality and technological nuances... It cries for a clear cut demarcation of institutional boundaries and redressal of many delicate issues which hitherto remain unaddressed in Indian jurisdiction," the HC said.

MEDIEVAL-MINDED

The amendments adopted by the Uttar Pradesh Assembly to make its regressive anti-conversion law more stringent seems to have ease of its misuse as its principal aim. The original law, enacted in 2021, led to the registration of over 400 cases by 2023. The amendments seek to increase the jail terms prescribed under the Uttar Pradesh Prohibition of Unlawful Conversion of Religion Act, 2021. If minors, women or "certain communities" were the target of conversion through use of force, threat or coercion, it could entail imprisonment up to 20 years and even for life. It also prescribes a stiff sentence and fine for receiving funds from foreign organisations for the purpose of unlawful conversion. A concerning feature is the introduction of stringent requirements for grant of bail that enhance the purported gravity of the offence. The amended law states that a person accused under the Act cannot be granted bail, unless the public prosecutor has been given an opportunity to oppose it, and that there should be reason to believe that the accused is not guilty of the offence, and is unlikely to repeat it while out on bail. The section is similar to the bail-denying provisions in the NDPS Act and the PMLA.

Another new feature, by which anyone can file a complaint against supposedly forcible or fraudulent conversions, is reprehensible, as it gives communal organisations and sundry



busybodies to get those opting for or supporting an inter-faith marriage arrested. Earlier, only an aggrieved person, that is, the victim or a close family member, could file a complaint against unlawful conversion. The move to amend the provision is likely motivated by the fact that bail has been granted to many arrested under this Act because the complainants were not aggrieved parties in those cases. The idea of giving more teeth to the law is rooted in the claim that the cases of “forced conversions” are on the rise in the State, but whether such a spike is a fact or a result of the widespread misuse of the Act against those opting for inter-faith marriages is something to be studied.

ON U.P.'S STRINGENT ANTI-CONVERSION LAW

The story so far:

The Uttar Pradesh Legislative Assembly on July 30 passed the Uttar Pradesh Prohibition of Unlawful Conversion of Religion (Amendment) Bill, 2024, altering the original 2021 anti-conversion law by making its provisions more draconian and susceptible to misuse.

Why was the amendment proposed?

According to the Bill's statement of reasons, the existing legislation needed to be made “as stringent as possible” owing to the alleged “organised and well-planned” involvement of “foreign and anti-national elements and organisations” in demographic change due to unlawful conversion. State government data reveals that between January 1, 2021, and April 30, 2023, 427 cases were registered under the Act.

The idea of giving more teeth to the law is rooted in the claim that the cases of “forced conversions” are on the rise in the State, but whether such a spike is a fact or a result of the widespread misuse of the Act against those opting for inter-faith marriages is something to be studied.

Does it increase penalties?

Earlier, a person convicted of unlawful conversion faced a minimum prison term of one year and a maximum of five years, along with a fine of ₹15,000. Under the amended Bill, the minimum term has been raised to five years, and maximum to 10 years. The fine has also been increased to ₹50,000. For unlawful conversions involving a minor, a woman, or a person belonging to a Scheduled Caste or Scheduled Tribe, the penalty has been increased from a prison term of 2-10 years to 5-14 years. The minimum fine has also been raised from ₹25,000 to ₹1 lakh.

The amendment also introduces two new categories of offences. First, the newly added subsection to Section 5 mandates a prison term of 7 years, extendable to 14 years, for anyone who secures “foreign” funds or funds from “illegal institutions for the purpose of unlawful conversion”. They will also be required to pay a fine of ₹10 lakh. Second, if the accused causes any person to “fear of his life or property, assaults or uses force, promises or instigates marriage, conspires or induced any minor, woman or person to traffics or otherwise sells them”, they shall be punished with a minimum 20 years imprisonment which can be extended to life imprisonment.

Who can register a complaint?

Under Section 4 of the original Act, only “any aggrieved person” or “his/her parents, brother, sister, or any other person who is related to him/her by blood, marriage or adoption” was authorised to file a criminal complaint for unlawful conversion. Despite this restriction, police



authorities were reportedly allowing FIRs to be lodged at the behest of right-wing activists and other unauthorised third parties. However, the amendment now grants legitimacy to such third-party complaints. The revised provision stipulates that “any person” can file an FIR related to any violation of the Act.

What about provisions for bail?

The amendment introduces stringent “twin conditions of bail” identical to those under statutes such as the Prevention of Money Laundering Act, 2002, and the Unlawful Activities (Prevention) Act, 1967. All offences related to unlawful conversion are now cognisable and non-bailable and can only be adjudicated upon by a sessions court or higher judicial forums.

Under the revised Section 7, an accused cannot be granted bail without first providing the public prosecutor an opportunity to contest the bail application. Further, if the public prosecutor opposes such a plea, the sessions court may grant bail only if “there are reasonable grounds for believing that [the accused] is not guilty of such offence” and that he or she is unlikely to commit any crime if released on bail. The reverse burden of proof on the accused renders it virtually impossible for anyone to obtain bail until the completion of the trial.

What about other States?

In addition to Uttar Pradesh, States such as Odisha, Madhya Pradesh, and Arunachal Pradesh have had anti-conversion laws for decades, while Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, and Uttarakhand have implemented such laws more recently.

Most of these laws require individuals intending to convert, or those facilitating conversions, to notify the government. In Madhya Pradesh, the law mandates a 60-day prior “declaration of the intention to convert” to the District Magistrate for the conversion to be valid. Himachal Pradesh and Uttarakhand require a 30-day prior notice. In contrast, Uttar Pradesh not only mandates a 60-day notice but also requires the Magistrate to conduct a police inquiry to ascertain the true intention behind the conversion. Another notable distinction is that other States confine the filing of FIRs to the aggrieved individual or their immediate family, thus excluding third parties with potential vested interests from initiating any legal action. The “twin conditions of bail” which impose a high threshold for securing interim release, are also absent in other State laws. With respect to punishment, none of the other States prescribe life imprisonment, instead, sentences vary between 2 to 10 years.

What happens next?

The validity of the law has always been in doubt, inasmuch as it tries to criminalise inter-faith marriages by treating “conversion by marriage” as one of the means of ‘unlawful conversion’, by declaring marriages for the purpose of conversion as null and void, and mandating prior intimation to the authorities for those intending to change their religion. The amendments worsen the multiple violation of fundamental rights and betray a medieval-mindedness unbecoming of a democratic government functioning under a forward-looking Constitution.

The constitutional validity of the amendment is likely to be challenged before the top court. A batch of petitions challenging the parent legislation and other anti-conversion laws are pending adjudication before a Bench. In May, in a separate case, a Bench had orally remarked that certain provisions of the 2021 Act appear to contravene Article 25 of the Constitution which guarantees the freedom of religion.



CAA PAPERWORK SIMPLIFIED; AMBIT OF RULES WIDENED AFTER GOVT ISSUES CLARIFICATION

The Centre Friday expanded the ambit of rules issued under the Citizenship (Amendment) Act to facilitate grant of Indian citizenship to persecuted minorities coming from Bangladesh, Pakistan and Afghanistan.

The Ministry of Home Affairs said any document issued by the Central or a state government or a quasi-judicial body in India proving that either of the parents, grandparents or great-grandparents is or had been a citizen of one of the three countries will be acceptable.

The Ministry clarification came after many applicants seeking Indian nationality under the Citizenship (Amendment) Act, 2019, were said to be facing difficulties due to a particular clause of the Citizenship (Amendment) Rules, 2024.

The earlier clause stated: "Any document that shows that either of the parents or grandparents or great grandparents of the applicant is or had been a citizen of one of the three countries i.e of Afghanistan or Bangladesh or Pakistan."

In its latest clarification, the Ministry said, "It may be clarified that the documents under Sr No. 8 of the Schedule-1A may include any document issued by the central government/state government/any judicial or quasi judicial body in India such as land record, judicial order etc., identifying or representing that the applicant or the parents or grandparents or great grandparents had been a national of Afghanistan or Bangladesh or Pakistan." "The above clarification may be taken note of while deciding any citizenship application under Citizenship (Amendment) Act, 2019 (CAA)," it stated.

The CAA was enacted in December 2019 for granting Indian nationality to persecuted Hindu, Sikh, Jain, Buddhist, Parsi and Christian migrants from Afghanistan, Bangladesh and Pakistan who came to India on or before December 31, 2014. Following the enactment, the CAA got the President's assent but the rules under which Indian citizenship would be granted were issued only on March 11 this year, after over a delay of four years.

The rules and the process

According to the Ministry, the Centre had notified the Citizenship (Amendment) Rules, 2024 on March 11.

"The Rules envisage the manner of application form, procedure for processing applications by District Level Committee (DLC) and scrutiny and grant of citizenship by State Level Empowered Committee (EC). In pursuance of these rules, applications have been received from persons belonging to Hindu, Sikh, Jain, Buddhist, Parsi and Christian communities from Pakistan, Bangladesh and Afghanistan who have entered India up to December 31, 2014, on account of persecution on grounds of religion or fear of such persecution," an official said.

The Citizenship (Amendment) Bill, which sought to fast-track the process of granting Indian citizenship to Hindus, Sikhs, Buddhists, Jains, Parsis and Christians – but not Muslims – who migrated to India owing to religious persecution in Pakistan, Afghanistan and Bangladesh, was passed by Lok Sabha on December 9, 2019, and Rajya Sabha two days later. It received the President's assent on December 12, 2019. Soon after the passage of the law, widespread protests broke out across the country.



J&K ADMIN SACKS FIVE POLICEMEN, ONE TEACHER ON NARCO-TERRORISM CHARGES

The Jammu and Kashmir administration sacked six government employees — including five policemen — without enquiry on charges of narco-terrorism on Saturday.

— They were all fired under Article 311 (2) (c) of the Constitution, which allows for the dismissal of government employees without enquiry where “interest of the security of the State” is involved.

For Your Information:

— Article 311 says that no government employee either of an all India service or a state government shall be dismissed or removed by an authority subordinate to the own that appointed him/her. Section 2 of the article says that no civil servant shall be dismissed or removed or reduced in rank except after an inquiry in which s/he has been informed of the charges and given a reasonable opportunity of being heard in respect of those charges.

— As per Article 311 subclause 2 provision a, if a government employee is convicted in a criminal case, he can be dismissed without DE. Apart from this, under 311 (2) (c), a government employee can be dismissed when the President or the Governor, as the case may be, is satisfied that in the interest of the security of state it is not expedient to hold such an enquiry, the employee can be dismissed without DE.

AS MPS FLAG ‘AGEING’ PARLIAMENT, A LOOK AT HOW 18TH LOK SABHA IS INDIA’S OLDEST EVER

In the recent general election, India elected its oldest ever Lok Sabha with the average age of MPs climbing to 56. The disparity between the average age of India’s politicians and its population has become a subject of discussion in Parliament during the ongoing Budget session.

While in the Rajya Sabha Aam Aadmi Party (AAP) MP Raghav Chadha Thursday called for the minimum age to contest elections to be dropped from 25 to 21, Congress MP Shashi Tharoor introduced a private member’s Bill in the Lok Sabha to reserve 10 seats in the Lower House for MPs younger than 35.

Chadha, 35, who raised the matter during special mentions, said the average age of India’s population deserves representation in the House. “At least 65% of our population is below 35 years and 50% below 25 years,” said Chadha, who is himself among the youngest MPs. “When the first Lok Sabha was elected after Independence, 26% of members were below 40 years. When our 18th Lok Sabha was elected two months ago, 12% of the members were below 40 years.”

It’s not the first time that a proposal for lowering the age for contesting polls has been made in Parliament. Last August, the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice recommended lowering the minimum age for contesting an Assembly election from 25 years to 18 years.

Age profile of Lok Sabha

The first Lok Sabha, elected in 1952, was the second youngest on record with the average age of MPs at 46.5 years. The first House also had a record 82 MPs aged 40 or under and no MPs older than 70.



lok sabha age Average age of MPs by Lok Sabha

Since then, the average age of MPs has risen consistently. In 1998, the average age dipped to the lowest ever at 46.4 years. Prior to the 2024 Lok Sabha polls, the highest average age was recorded after the 1999 elections at 55.5 years. This time, the average age of the MPs in the 18th Lok Sabha hit a record high of 56.

In the current Lok Sabha, there are just 25 MPs under 35, of whom only seven are under 30. Only two previous Lok Sabhas have had fewer MPs below the age of 35 – in 2019 at 21 and in 2009 at 22. The number of MPs aged 35 or less has consistently declined since the first Lok Sabha.

lok sabha MPs under 35 by Lok Sabha

In contrast, there are now 380 MPs who are 51 or older. Of them, as many as 53 are older than 71 years and 161 MPs are aged 61 to 70 years. At 30.6%, the 51-60 age group has the largest representation in the House.

The oldest sitting MP T R Baalu of the DMK has been elected from Tamil Nadu's Sriperumbudur. At 82, he is the only MP older than 80.

There are three MPs aged 25, the youngest eligible age to contest the Lok Sabha polls – the Samajwadi Party MPs Priya Saroj from Machhlishahr and Pushpendra Saroj from Kaushambi in Uttar Pradesh, and the Lok Janshakti Party (Ram Vilas)'s Shambhavi Choudhary from Samastipur in Bihar.

In comparison with the MPs, the average age of Indians is just 27.8 years old, as per the 2011 Census.

How MPs' minimum age was decided

The debates in the Constituent Assembly, which drew up the Constitution, suggest several of India's early leaders were in favour of a lower age requirement for becoming an MP.

Article 84, which sets the eligibility criteria for parliamentarians, was introduced as an amendment to the Draft Constitution in the Constituent Assembly by B R Ambedkar on May 19, 1949. In his provisions, Ambedkar recommended 25 years as the minimum age for the Lower House but set the bar at 35 for the Rajya Sabha.

Ambedkar argued that merely being a voter — whose eligibility criterion was 21 years until 1988 — was not enough to serve in Parliament. Though the minimum age for becoming an MP in the Lok Sabha was accepted, several members of the Constituent Assembly said 35 years was too high a bar in the case of the Rajya Sabha.

G Durgabai, a freedom fighter, feminist and social worker, proposed that the limit for a Rajya Sabha MP be lowered to 30. "Wisdom does not depend on age... Our boys and girls are now more precocious and the educational curriculum is now so broad-based that it will educate them very well in respect of their civic rights and duties. I therefore think we should give a chance to these younger people to be trained in the affairs of the state," Durgabai said.

Shibban Lal Saxena, an educator and freedom fighter, citing examples of Shankaracharya becoming a scholar at 22 and Alexander the Great's conquests before turning 25, said, "Our



country of 300 million may produce precocious young men fit to occupy the highest positions at an age younger than 25 and they should not be deprived of the opportunity.”

Ambedkar argued in response that reducing the minimum age for the Upper House would be inconsistent with the provision that set the minimum age for the vice-president, who would preside over the Rajya Sabha, at 35. However, he finally agreed to Durgabai’s amendment for a limit of 30 years and, shortly afterwards, it was adopted by the Constituent Assembly. The same criteria of 25 and 30 years for the two Houses were later applied to the state legislatures as well.

A CASE OF EXCESSES

Even one egregious violation of the rule can cast shade on the entire process. In what has emerged as the outlandish tale of Puja Khedkar, the multiple methods by which she stepped outside the law would be fantastic, if they had not been proven true. However, having pulled wool over the eyes of the entire Union Public Service Commission recruitment infrastructure, by conniving and scheming, it is a scene too chilling for comfort. She claimed mental illness, and visual impairment, faked a community certificate, used a disability certificate to get chosen, having scored a rank that would have otherwise put her out of the reckoning. Meanwhile, the hospital in Pune which issued her a disability certificate said it had certified a 7% locomotor disability and that would have been practically useless in gaining concessions, as a higher degree of disability was required to benefit. Considering how persons with a true disability must jump through hoops to merely get the disability certification, her ease of getting the certificate while faking disability, raises the question: are some more equal than others? She milked the privilege stemming from her father’s position in the civil services to commandeer a series of benefits that she might have otherwise had no access to. Contributing to her infamy is her fabricated OBC certificate; using multiple identities to write the tests, claiming falsely that her parents were divorced to overcome the creamy layer exclusion criteria. The scarier fact is that none of this would have come to light had Khedkar not indulged flamboyantly in perks not assigned to her station as a probationer — she installed a beacon on her private luxury sedan and illegally stuck a Maharashtra government sticker on it. She will soon receive an order cancelling her candidature.

It has admittedly not been a good year for qualification examinations in the country, with controversies dogging medical admissions with NEET UG, NEET PG and the Common University Entrance Test (CUET) for admission into central universities. There is no merit in arguing that she might be just one aberration, because her excesses and those of her parents’ have happened as the UPSC remained completely oblivious and unable to detect fraud. This is not excusable. The government now needs to ensure that the entire competitive examination system receives a thorough overhaul. Administrators and systems must not be gullible or unequipped to meet new challenges thrown up by contestants and emerging technology. Meanwhile, with this incident as the peg, the government must cast its eye on the disability certification process, making sure that genuine applicants are fairly dealt with.

PREAMBLE DROPPED FROM SEVERAL NCERT CLASS 3, 6 TEXTBOOKS

In the newly published textbooks for Class 6, the NCERT has dropped the Preamble from the social science textbook, Exploring Society: India and Beyond. The book mentions the fundamental rights and fundamental duties. The Preamble is present in the science textbook, Curiosity, and the Hindi textbook, Malhar.



In the old textbooks, the Preamble was printed in the English book, Honey Suckle, the science book, the Hindi textbook, Durva, and all three social science books — Our Past-I, Social and Political Life-I and The Earth Our Habitat.

The new English textbook, Poorvi, has the National Anthem, while the Sanskrit textbook, Deepakam, has both the National Anthem and the National Song, but not the Preamble. The earlier Sanskrit book, Ruchira, also did not have the Preamble.

The new Class 3 textbooks for Hindi, English, mathematics and World Around Us (which replaces EVS) do not have the Preamble. The old EVS book, Looking Around, and the Hindi book, Rimjhim 3, carried the Preamble. “The allegations regarding removal of the Preamble from textbooks do not have a sound basis,” Professor Ranjana Arora, Head of the Department of Curriculum Studies and Development at NCERT, said.

EXPLAINED: THE RECOMMENDATIONS FOR EQUIVALENCE ACROSS INDIA'S 69 SCHOOL BOARDS

PARAKH, a standard-setting body under the NCERT, has recently submitted to the Ministry of Education an ‘equivalence’ report, which makes recommendations on how equivalence can be achieved across different school boards in the country, in keeping with a mention of it in the National Education Policy (NEP) 2020.

The NEP provides for the formation of a body like PARAKH, and states that PARAKH “will also become an instrument for the sharing of best practices among school boards, and for ensuring equivalence of academic standards among learners across all school boards.”

What does equivalence across boards mean?

A government official pointed out that school boards now are different from one another, in terms of factors including curriculum, examinations, and the structure and functioning of the board itself, resulting in some boards being seen as “better” than others.

There are 69 school boards in the country, including the State boards – some are secondary boards only, some are for higher secondary, and some are common for both – and CBSE, ICSE, the National Institute of Open Schooling (NIOS) and other open school boards, technical and vocational boards, Sanskrit boards, and madrasa boards.

The ‘equivalence’ report sets standards for the boards across five categories – administration, curriculum, assessment, inclusiveness, and infrastructure. The official explained that the intention behind pursuing equivalence is not to establish “uniformity” across boards, but ensure that “every learner who enrolls in a school affiliated in any board should get certain standardised, benchmarked facilities for performance.”

What recommendations has PARAKH made?

A key recommendation is in terms of assessment – a student’s performance in Class 9, 10, and 11 will count towards the final assessment for Class 12. The Class 12 report card is envisaged as a ‘cumulative’ one, and a weight of 15% for Class 9, 20% for Class 10, 25% for Class 11, and 40% for Class 12 will go into the final Class 12 results.

Another recommendation is that these assessments be in terms of credits in each grade, with the student earning a certain number of credits for each subject, for pursuing online courses, and for

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



activities that are part of the holistic progress card – a progress card which will include the student’s evaluation of themselves in aspects like ‘time management’ and ‘plans after school’, the teacher’s assessment of the student in group project work, and peer feedback.

PARAKH has suggested that boards develop a cadre of ‘professional paper setters’ –teachers who will be trained to prepare question papers, to ensure standardisation in the assessments in classes 9, 10, 11 and 12.

For standardisation of question papers, PARAKH recommends that for classes 9 and 11, boards develop a question bank for all subjects offered. A blueprint to develop a question paper is also to be prepared and teachers in affiliated schools can prepare the question paper based on the question bank and the blueprint. Question paper blueprints have also been suggested for Class 10 and 12.

In terms of administration, PARAKH has suggested that the guidelines for school affiliation specified by the boards be finalised according to its recommendations. Boards lay down specific conditions that a school needs to meet to be affiliated to it – the CBSE, for instance, has conditions that include one that says that the school must be located on a single, contiguous plot of land, and a proper playground should exist in addition to a suitable building.

PARAKH’s recommendation says that the boards should conduct periodic reviews of affiliated schools, and affiliations should be granted for a maximum period of three years only. Since there are some States where the Directorate of Education recognises and affiliates schools, PARAKH has also recommended that the boards be empowered to do this, in addition to being given the authority to identify unrecognised institutions and take action against them.

The recommendations suggest that boards develop a mechanism to prevent cheating in examinations, implement protocol for handling exam papers, and conduct digital assessments where applicable.

In terms of curriculum, the boards are to incorporate digital literacy in affiliated schools, including training in coding and cybersecurity, and adhere to the National Curriculum Framework for School Education.

In terms of infrastructure of the schools affiliated with them, the boards are to ensure availability of basic infrastructure – toilets for girls and boys, internet, library, strongroom for question papers, labs, ramps, or elevators.

How were these recommendations arrived at?

A total of 32 boards, excluding the Sanskrit boards, madrasas, and technical boards from the total number in the country, were assessed according to the five parameters – administration, curriculum, assessment, inclusiveness, and infrastructure – to determine their present status. An analysis of two years’ worth of question papers of the boards, and a questionnaire with questions on five parameters was used for this. PARAKH held meetings with the school boards to work on the recommendations.

What happens next?

PARAKH had a conference with representatives of seven State boards last week to discuss the recommendations in the ‘equivalence’ report. The States have suggested that the Class 10 marks include 40% of the Class 9 score and 60% of Class 10, while the Class 12 marks could include 40%



of the class 11 score and 60% of Class 12. Conferences with the rest of the boards are set to be held in August.

Since PARAKH's analysis of the boards' question papers and the questionnaire has given boards their present status, the official said that the boards will now have to prepare a roadmap that will entail how they intend to go about achieving the benchmarks that the 'equivalence' report specifies. Funding is also proposed, for the boards to work on the roadmap, the official added.

Another official in the Ministry of Education said that the 'equivalence' aspect is a "challenging" part of the NEP to implement and is set to be a slow process, since the boards will have to agree to making the changes that the report envisages, rather than just being "examination conducting bodies."

NCERT PROPOSES 10 'BAGLESS DAYS' A YEAR FOR STUDENTS FROM CLASSES 6 TO 8

To provide respite to students from Classes 6 to 8, the National Council of Educational Research and Training (NCERT) has proposed 10 'bagless days' to be implemented by schools across States.

In its guidelines, the NCERT said that teachers would have to plan activities for students to learn from local vocational experts, including carpenters, gardeners, potters, and artists.

'World of work'

"On an average, teachers and children spend around six hours a day and over 1,000 hours a year in school. Minimum 10 days or 60 hours of the school time should be allocated to the activities for this programme," the guidelines, which are in line with the requirements of the National Education Policy 2020, stated.

"The child's need to be prepared for the 'world of work', and a work-centred pedagogy can be pursued with increasing complexity while always being enriched with the required flexibility and contextuality," the guidelines said.

The guidelines said bagless days were important to provide exposure to the world outside the classroom with transactions that affect and contribute to day-to-day life; to build observation-based learning capacity and scope for practice; and to develop an understanding of the connectedness of community and interdependence. Bagless days will also help develop interdependence in classrooms, with theoretical as well as practical application and promote the dignity of labour through hands-on activity and existing local vocations, the guidelines said.

NIPUN

— Under Samagra Shiksha, a dedicated mission 'National Initiative for Proficiency in Reading with Understanding and Numeracy' (NIPUN Bharat) was launched by the government of India on 5th July 2021.

— The mission aims to ensure that every child in the country attains foundational literacy and numeracy by Grade 3 by 2026-27.



A CRIME AGAINST WOMEN

“Labelling of women with mental health issues as witches in large parts of the country points to failures of society, abdications of law.”

— “In July 2021, the UN Human Rights Council adopted a resolution on the elimination of harmful practices related to accusations of witchcraft and ritual attacks (HPAWR). Through the UN, we have data on documented HPAWR (between 2009 and 2019) in 60 countries.....e might think this is an African problem. As the UN compilation shows, that perception isn’t true. The intensity might be higher in Africa. But HPAWR exists in the USA and Europe, and even in India.”

— “Since 1953, NCRB (National Crime Records Bureau) has been a standard source of data on crime in India. That has a category on “motives for murder” and mentions witchcraft. In 2022, there were 85 such murders, concentrated in Chhattisgarh, Madhya Pradesh, Jharkhand and Odisha. In addition, there are instances from Assam, Bihar and Telangana. The numbers may have declined a bit. But we are still at about 100 a year and these are just murders with witchcraft as a motive.”

— “The word “witch” is gender-neutral, etymologically, although there is a popular perception that the male of the species is wizard (wicca), while the female is a witch.”

— In principle, witchcraft can be benevolent. But in perception and practice, it is dubbed malevolent. The roots are old. However, that dubbing as malevolent is used for crimes against women, not always leading to murder.”

— “As a less diabolical motive, there is a lack of education and ignorance, with mental health patients dubbed as witches, especially when there is disease in the neighbourhood. As a more diabolical motive, there are widowed and single women, with their property being a target.”

— “What do we do about witch-hunting practices? —One can invoke parts of the Constitution, IPC (Indian Penal Code) and Protection of Human Rights legislation. But some states have specific legislation – Prevention of Witch (Daain) Practices Act (1993) in Bihar; Prevention of Witch (Daain) Practices Act (2001) in Jharkhand; Tonahi Pratadna Nivaran Act (2005) in Chhattisgarh; Prevention of Witch Hunting Act (2013) in Odisha;...Prevention and Eradication of Inhuman Evil Practices and Black Magic Act (2017) in Karnataka; Prevention of Witch Hunting Act (2015) in Rajasthan; and Witch Hunting (Prohibition, Prevention and Protection) Act (2015) in Assam.

— Notice the vintage of legislation. These are all relatively recent, reflecting the belief that a modern country should have specific legislation to address the issue.”

For Your Information:

— Jharkhand has “Project Garima”, to restore the dignity of women branded as witches. Assam has “Project Prahari”, a community-policing initiative.

GOOGLE TAKES ON TWO DOMESTIC RIVALS AS INDIAN MAPS’ WAR HEATS UP

Legal notices over alleged intellectual property theft, massive price cuts to lure developers, and India-specific changes – it’s all happening in the digital maps market in the country. With at least three key players – one international and two domestic – fighting it out, the future of maps’ domination in India hangs in the balance.



Google Maps, MapMyIndia, and riding the nationalistic fervour, Ola Maps, all find themselves pitted against each other, with the end of the road being control of the lucrative digital mapping and navigation market in India. None can afford a wrong turn.

The last two months have seen unprecedented action in the Indian maps market. MapMyIndia sent a legal notice to Ola alleging that the IPO-bound firm has “copied” its data and “reverse-engineered” its app to make Ola Maps.

Earlier this month, Ola had exited from using Google Maps to its own mapping system in a bid to save money as its founder Bhavish Aggarwal drums up the need to have domestic champions. And Google, equipped with its deep pockets, has responded to the move by announcing a big price cut for developers.

MapMyIndia’s B2B advantage, Google’s consumer domination

MapMyIndia is the oldest company of the three. In fact, the company, formally known as CE Info Systems, is older than the first version of Google itself, having started in 1994.

While MapMyIndia has a majority market share – close to 80 per cent – in the automotive OEM space, Google rules the roads as far as consumer-end navigation is concerned. A number of applications that need maps and navigation data, such as ride hailing firm Uber, also rely on Google’s system. MapMyIndia, on the other hand, powers consumer end navigation services such as Apple Maps.

Even as Google’s turn by turn navigation is considered to be fairly accurate, especially in major Indian cities, the fact that all Android phones come equipped with Google’s suite of services, including its maps app also allows it to corner it a big market share in the consumer space. It is typically the only maps app that people use on their smartphones.

While Google Maps is free for end-users, businesses have to pay for integrating it within their service.

An alleged IP theft

On Monday, MapMyIndia, in a legal notice, alleged that Ola Electric breached their licence agreement. In 2022, Ola Electric onboarded MapMyIndia to offer navigation services for its S1 Pro electric scooter.

“You have duplicated our client’s API (application programming interface) and SDKs (software development kits) from proprietary sources belonging to our client to build OLA Maps. It is firmly stated that our client’s exclusive data has been copied/derived by you to further your illegal motive and for your unjust commercial gains,” MapMyIndia said in the legal notice.

The notice asks Ola to cease and desist any use of API and map data developed by MapMyIndia and handover all written or electronic information, descriptive matter including drawings, specifications, descriptions, tapes, and documents related to their intellectual property.

Ola has denied the allegations. “We would like to state unequivocally that these allegations are false, malicious and misleading. Ola Electric stands by the integrity of its business practices. We will suitably respond to the notice shortly,” the company said in a statement.



Ola move forces Google hand

Earlier this month, Ola's Aggarwal announced that his company was shifting from using Google Maps and shifting to its inhouse Ola Maps – which is currently being alleged of theft by MapMyIndia.

Ola, however, has attributed OpenStreetMap on its app, indicating the Ola Maps solution has been built on top of it, along with proprietary data from Ola. OpenStreetMap is an open-source and free-to-use map, with an open licence.

“We used to spend Rs 100 crore a year but we’ve made that 0 this month by moving completely to our in house Ola maps,” Aggarwal had posted on social media platform X. He had also announced APIs for developers to integrate Ola Maps within their service and move away from Google Maps.

In response, Google introduced India-specific pricing for developers using the Google Maps platform with up to 70 per cent lower costs on most APIs. It also said that it was collaborating with the Open Network for Digital Commerce (ONDC), offering developers building for ONDC up to 90 per cent off on select Google Maps Platform APIs.

While Google's price cut was seemingly a direct response to Ola's moves, it also had an unintended consequence on MapMyIndia, highlighting the intertwined fate of the three competitors: when Google announced these price cuts, MapMyIndia's share fell close to 11 per cent during intraday trading.

Aggarwal slammed Google's “belated” price cuts, and responded with a more aggressive price cut for Ola Maps.

A few days later, Google also announced India-specific features on Maps, including a long-standing demand to show whether a particular flyover should be taken or not. The update also includes EV charging station information and AI-driven routing capability to reduce narrow road usage for four-wheeler drivers.

40 YEARS AFTER RAKESH SHARMA, SUBHANSHU SHUKLA TO BE 2ND INDIAN TO TRAVEL TO SPACE

Group captain Subhanshu Shukla will most likely become the first Indian in space in 40 years with Indian Space Research Organisation (ISRO) naming him the ‘prime’ astronaut for the first ISRO-NASA mission to the International Space Station, scheduled for any time after October this year.

— ISRO on Friday said it had selected Shukla, 39, and Group Captain Prasanth Balakrishnan Nair, 48, for the Axiom-4 mission, and named Shukla as the ‘prime’ astronaut, meaning he would be the one who would go to the International Space Station. Nair is the backup for this mission. He will take over in case Shukla is unable to go due to any reason.

— Only one Indian has ever been in space till now – Rakesh Sharma – who was wing commander when he flew on a Soviet spacecraft in 1984.

— Shukla and Nair are among the four Indian air force officers selected for India's first manned space mission, Gaganyaan, that is now tentatively scheduled for next year.



— Axiom-4 is the fourth mission by private space company Axiom Space in collaboration with NASA. The spacecraft would be launched by a SpaceX rocket. Apart from Shukla, three other astronauts — one each from Poland, Hungary and the United States — will travel to the International Space Station.

— India's Gaganyaan mission is dependent on experience gained from the ISS mission by the Indian astronauts.

For Your Information:

— Announced in 2018, Gaganyaan is one of India's most ambitious space programmes. The task of sending humans into the vast unknown and bringing them back safely is more expensive and challenging than the Mars and Moon missions. A successful execution would put India in the company of the US, Russia and China.

39% TB CASES FOUND DURING T.N. TB SURVEY HAD NO SYMPTOMS

The first-of-its-kind TB prevalence cross-sectional survey was carried out among individuals aged older than 15 years across Tamil Nadu from February 2021 to July 2022. Based on the survey findings, the authors of the study from the National Institute for Research in Tuberculosis (ICMR-NIRT), Chennai have recommended that the State TB programme should prioritise the use of chest X-rays for earlier detection of cases and for cutting the transmission chain, and upscale the molecular tests to increase the yield. The results were published recently in The International Journal of Tuberculosis and Lung Disease.

In a cross-sectional survey, 130,932 participants consented to participate. Among them, 130,914 underwent symptom screening and 125,870 underwent both symptom screening and chest X-ray examination. Those with symptoms of TB and/or abnormal chest X-rays were tested for TB using Xpert, smear microscopy, and liquid culture. The survey identified 244 microbiologically confirmed TB cases. Among the 244 patients with TB, only 54.5% (133 people) reported having symptoms of TB, while 92.6% (224 people) had chest X-ray abnormalities.

Among the 244 TB cases detected, molecular test (CBNAAT) correctly detected 224 (91.8%) cases, while smear microscopy was able to detect only 123 (50.40%) cases. Even among the 115 symptomatic TB cases, 89% (102) were diagnosed by CBNAAT compared with 58 (50%) who were diagnosed based on smear microscopy. The Tamil Nadu TB programme, which over-relies on smear microscopy, must scale up molecular tests, the authors write.

The most important finding from the survey is that 39% (94 people) of the TB cases detected had no TB symptoms, otherwise called subclinical TB, which would have been missed if a chest X-ray had not been used. All 94 people with TB, who were initially picked up based on chest X-ray abnormalities and subjected to sputum examination, were found to be bacteriologically positive, thus confirming TB disease. This highlights the importance of using chest X-ray for screening even in people who do not exhibit any symptoms. Currently, the TB programme in Tamil Nadu offers chest X-rays only for those with symptoms. Based on the survey findings, the State should prioritise the use of chest X-rays for earlier case detection and increase the yield.

Even active case finding of high-risk/vulnerable groups across India screens people for presumptive TB symptoms/signs, leaving out a huge chunk of people with subclinical TB. As per the India TB Report 2022, 22.1 crore individuals in India were screened for presumptive TB as part of active case-finding. Of this, only 48,329 (2.5%) were diagnosed, resulting in a low yield of



just 22 per 100,000 population. Considering that TB incidence in 2022 was 199 per 100,000, active case finding, which is a targeted approach to find more cases in vulnerable populations, should have produced a higher yield. The use of chest X-ray as a preliminary screening tool along with molecular diagnostics will surely help in better detection of cases.

That 39% of TB cases detected had no symptoms is not surprising. As per the National TB Prevalence Survey report (2019-2021), 42.6 % of the TB cases, which were bacteriologically positive but did not exhibit any TB symptoms, would have been missed if chest X-ray was not included as an additional screening tool.

Even when people do not exhibit symptoms, they can still have the high bacillary loads typically associated with transmission, according to a 2021 paper in the American Journal of Respiratory and Critical Care Medicine. It also says that though cough is associated with higher infectiousness, cough is not necessary for transmission. “Subclinical TB can potentially drive a substantial fraction of transmission on a population level because of its high prevalence and long duration,” it says. Although cough expels large quantities of droplets leading to increased transmission risk, respiratory droplets can also be expelled without cough such as during singing, talking, and tidal breathing, the paper says.

Across the globe, TB incidence has been dropping more slowly compared with TB deaths suggesting that all TB measures have been less effective in stopping transmission. According to the 2021 paper, one explanation for the slower reduction of TB incidence might be that people with “subclinical TB may be the source of a large fraction of ongoing TB transmission”.

AIIMS SOFTWARE CAN EXTEND SPECIALIST CARE FOR DIABETICS IN RURAL AREAS

During the Covid pandemic, when lockdowns made physical interaction with healthcare providers difficult, digital technologies provided timely relief to a section of people with chronic ailments. The emergency pushed healthcare professionals and policymakers to recognise the potency of telemedicine in managing diseases such as diabetes, in which constant doctor-patient engagement is particularly crucial. A digitally connected healthcare ecosystem, it's now recognised, can improve treatment outcomes, especially in large parts of rural India where the lack of specialists often comes in the way of timely diagnosis and medication. A software, developed by doctors and technicians at AIIMS, Delhi, is a significant initiative in this respect. It can extend specialised diabetes consultation to primary healthcare centres (PHCs) in rural areas.

Studies have suggested that India's diabetes burden — already the second highest in the world — is underreported because close to 50 per cent of patients, in both rural and urban areas, are unaware of their condition. Much time is lost before arriving at a diagnosis because the general physician at PHCs or small clinics cannot always join the dots between the diabetic's symptoms. The software is one step towards addressing these deficits. It requires the local-level healthcare professional to feed-in patient data on risk factors like blood pressure, cholesterol, blood sugar. It then processes the information to suggest the treatment.

All this, however, does not attenuate the significance of the attending physician. The doctor will need to adapt the software's advice based on the patient's lifestyle. The digital intervention's potency, therefore, is related to the quality of analogue care. The country's diabetes management system requires accessible PHCs run by quality professionals empowered by digital resources. The AIIMS software will also become more potent if it is synced with the electronic repository of the National Health Programme for Non-Communicable Diseases. Data portability will be in line



with the Ayushman Bharat Digital Health Mission's objective of facilitating seamless interaction between medical experts. A second caveat: Given the asymmetrical relation between patients and health service providers, the system should be insulated against data confidentiality breaches.

GOVT SPENT 14% FUNDS UNDER AYUSHMAN ON THOSE OVER 70 YRS: WHAT DOES THIS MEAN FOR FULL COVER TO THE ELDERLY?

Beneficiaries aged 70 years and above made up over 12 per cent of all admissions under the government's flagship Ayushman Bharat health insurance scheme, with their treatment costs accounting for nearly 14 per cent of the total expenditure till January, according to data presented in Parliament by the Union Ministry of Health and Family Welfare.

— The data shows that of the nearly 6.2 crore approved hospital admissions till January 2024, as many as 57.5 lakh were senior citizens aged 70 years and more. The government's expenditure for treatments under the scheme reached a staggering Rs 79,200 crore over the last six years till January 2024, of which Rs 9,878.5 crore was allocated to treat those who are 70 years and over.

— With an ageing population with inadequate health coverage, the expansion of the scheme for those over 70 years across all income groups is expected to have a significant impact. India's population over the age of 60 years is estimated to increase from 8.6 per cent in 2011 to 19.5 per cent by 2050, according to the Longitudinal Ageing Study in India (LASI). In terms of absolute numbers it means that the population over the age of 60 years is set to triple from 103 million in 2011 to 319 million in 2050.

For Your Information:

— Over six years since the Centre's flagship health insurance scheme Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) was launched in 2018, two-thirds of the total money spent under the scheme each year went to private hospitals across the country. This came from 2.95 crore patients — 54% of all beneficiaries till December 2023, an investigation of official records and data obtained under the Right to Information by The Indian Express reveals.

— The scheme is jointly funded by the Centre and the states in the ratio 60:40 (90:10 in the case of North-East and hilly states). Government hospitals account for 58% of all facilities empanelled.

— In a country where the private sector anyway accounts for more hospitalisation cases — 60% in urban areas and 52% in rural areas — this trend affirms that for a big section of the population that was dipping into its savings for treatment in private hospitals, the Ayushman Bharat scheme has significantly reduced their out-of-pocket healthcare spending.

— According to the National Health Authority- Ayushman Bharat, a flagship scheme of Government of India, was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC). This initiative has been designed to meet Sustainable Development Goals (SDGs) and its underlining commitment, which is to "leave no one behind."

EXPLAINED: THE DEBATE OVER GST ON HEALTH INSURANCE

— GST replaced all indirect taxes like service tax and cess from July 1, 2017. Currently, GST on health and life insurance policies is fixed at 18%. Since GST encapsulates service tax, which applies to the insurance industry, its introduction has resulted in an increase in premium amounts.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



— Prior to GST, life insurance premiums were subject to 15% service taxes, comprising Basic Service Tax, Swachh Bharat cess, and Krishi Kalyan cess. The increase from 15% to 18% impacted the end consumer — that is, policyholders — by raising their premiums amounts.

— This, along with the runaway cost of treatment — medical inflation was estimated to be 14% towards the end of last year — has made buying medical insurance difficult for many people.

— GST rates and exemptions on all services, including GST on health insurance premium, are prescribed on the recommendations of the GST Council.

— GST is applicable to all insurance policies since insurance is a service, and policyholders pay tax on their insurance premium.

— Insurance companies say the rise in retail inflation has added to their overall costs. Medical inflation is much higher than retail inflation (5.08% in June this year), they point out.

— Just five states — Maharashtra, Karnataka, Tamil Nadu, Gujarat and Delhi — contributed about 64% of the total health insurance premium in 2022-23; all other states together contributed the remaining 36%.

— According to a Swiss Re Sigma report, insurance penetration in India's life insurance sector reduced from 3.2% in 2021-22 to 3% in 2022-23, and remained stagnant at 1% in the non-life insurance sector. As such, India's overall insurance penetration reduced to 4% in 2022-23 from 4.2% in 2021-22.

For Your Information:

— GST levied on insurance in the country being highest in the world, needs to be addressed by the government to attain the goal of "Insurance for all by 2047" which was endorsed by the Standing Committee on Finance.

UP BUT OUT

It proved to be a tale of so near and yet so far for Vinesh Phogat on a sombre Wednesday in Paris. The 29-year-old wrestler with roots in Haryana was in red-hot form and seemingly the force was with her in the women's 50kg segment. However, hours before the summit clash against Sarah Ann Hildebrandt of the United States, Vinesh's Olympic dreams of winning a gold fizzled out. In the acutely razor-sharp lines that distinguish weight categories especially in combat sport, India's ace wrestler was found to be 100 grams above the stipulated 50kg at the 7.15 a.m. mandatory weigh-in before the final bout. This was heartbreak of the extreme kind for the athlete and the funereal effect rippled through an expectant nation hoping for a gold or at least a silver. Having weighed 49.90kg on Tuesday morning, Vinesh acquired a massive halo through the day, toppling defending champion Yui Susaki of Japan and eventually getting past Cuba's Yusneylis Guzman Lopez in the semifinal. At the mixed media zone, Vinesh waved to the scribes but refrained from having a chat. The alarm bells, though, were ringing loud and clear within the Indian contingent as Vinesh and her support staff were conscious about her latest weight being 52.7kg.

The ensuing night was all about pursuing a crash course in losing extra kilos. Extreme measures such as starvation, water being ignored, frenetic exercises and induced nausea were all attempted. Even insomnia occurred and still the weighing machine did not budge on Wednesday morning. With an original body weight of around 55kg, it was extraordinary that Vinesh even attempted to



compete in the 50kg bout after finding her regular 53kg category spot resting with the emerging Antim Panghal. The United World Wrestling, the sport's governing body, is clear about the rules pertaining to body weight: if an athlete fails the weigh-in, he or she will be eliminated from the competition and ranked last. In the larger scheme, Vinesh's charge towards the victor's podium, even if it culminated in despair, was seen as a metaphor for a larger battle that she and other wrestlers waged against the former Wrestling Federation of India chief Brij Bhushan Sharan Singh. The allegations of sexual harassment centred around Brij Bhushan cleaved India's sporting heart; but an administrative system leaning on patriarchy, rebuffed the wrestlers before attempting a belated clean-up. Seen through that prism, the overwhelming angst over Vinesh's exit is understandable. Rules are sacrosanct, and Vinesh found herself at the wrong end and her retirement announcement has left Indian sport poorer, while she still awaits the verdict of the authorities over her appeal for a joint silver medal consideration.

2023 SAW HIGHEST-EVER TRANSPLANTS, 63% OF LIVING DONORS WOMEN: DATA

Of the total 18,378 organ transplants in the country in 2023 — the highest-ever in a year — 10% were to foreign nationals who had come to India for treatment, while more than six of 10 living organ donors were women, shows data released Saturday by the National Organ and Tissue Transplant Organisation (NOTTO).

According to the data, 63% living donors were women while 77% of deceased donors were men. Among the recipients, 30% were women, with their proportion being the highest among lung recipients at 47%.

EK PED MAA KE NAAM

- The 'Ek Ped Maa Ke Naam' campaign was launched by Prime Minister Modi on the occasion of World Environment Day on 5th June 2024.
- The Kingdom of Saudi Arabia hosted the celebrations of World Environment Day.
- The theme of World Environment Day 2024 is "Our Land, Our Future."
- The Republic of Korea will host World Environment Day 2025 with a focus on ending plastic pollution globally.

UNDER-CONSTRUCTION BRIDGE COLLAPSES IN BIHAR'S KATIHAR; 14TH SUCH FAILURE SINCE JUNE

A bridge being constructed across the Ganga at Bakia Sukhay in Bihar's Katihar district collapsed on Thursday, officials said. This is the 14th instance of bridge collapse in the State since June. The bridge was being constructed at a cost of ₹3 crore by the Rural Works Department and was expected to be inaugurated soon.

This project was to be completed in 2023, but its deadline revised to July 2024. With the construction of the bridge, the people of Bakia Sukhay panchayat and its surrounding areas would have had direct access to Barari, block headquarters, by road.

Residents said it had rained continuously for the past two days in the area and the rain, coupled with the heavy flow in the Ganga, had led to the collapse. "Due to the erosion caused by the Ganga, two pillars of the bridge built by the Rural Works Department, collapsed. The matter is being

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investigated and action would be taken accordingly,” said Anwar Jamal, Chief Engineer, Katihar Flood Control Division.

There have been a slew of bridge collapses in the State in the past 30 days. On June 22, a portion of a bridge collapsed in Siwan and on June 18, in Araria, an under-construction bridge had caved-in. On July 10, a bridge had come crashing down at Mahishi village in Saharsa district. The Bihar government has suspended at least 15 engineers in connection with the damage.

The most recent bridge collapse also comes at the time when a bridge in Araria district had been criticised for being constructed in the middle of an open field, with no road connectivity on either side.

WHAT IS A BAILEY BRIDGE, USED DURING WAYANAD RESCUE OPS

The Indian Army’s Madras Engineer Group last week assembled a Bailey bridge at Chooralmala to reach Mundakkai village, one of the sites worst hit by the landslides in Wayanad.

The 190-foot bridge has since been crucial in facilitating the movement of men, heavy machinery and ambulances. It can carry weights up to 24 tonnes, and will remain in use until a permanent bridge is built.

A Bailey bridge is a type of modular bridge whose parts are pre-built, so they can be put together quickly as needed. An English civil engineer named Donald Coleman Bailey is credited with inventing it during World War II.

A US Army Engineer School manual says that Bailey gave his first sketch of a bridge that could be moved, rebuilt, or replaced in hours, even under enemy fire, to the British War Office in 1941. “It was used widely and well by Allied armies in Italy and northwest Europe, 1943-45,” the manual says.

The British Field Marshal Lord Bernard Law Montgomery said: “Without the Bailey bridge, we should not have won the war. It was the best thing in that line we ever had.”

The pre-fabricated parts in a Bailey bridge include light steel panels linked through pins, which are big, screw-like objects. These help establish the guardrails of the bridge. Through the guardrails on either side, workers place beams to form the deck or path of the bridge. All beams were constructed such that they would lock in on the guardrails to ensure stability.

After that, the bridge can be extended, and the lightness of the parts allows it to be mobile. No heavy installation equipment is needed. In disaster relief situations, this is ideal because parts can be transported in small trucks — something also of use during wartime.

A Defence Research and Development Organisation (DRDO) publication says, “The Indian armed forces, and particularly the Indian Army carried on the British legacy and thus inherited a large inventory of the Bailey bridge.” Such bridges were used in the 1971 war with Pakistan, and in disaster relief situations such as in Uttarakhand after the flash floods of 2021.



HOW CAN WAYANAD REDUCE LANDSLIDE RISKS?

The story so far:

Massive landslides hit the district of Wayanad in northern Kerala in the early hours of July 30, with continuous torrential rainfall triggering large-scale death and destruction in Mundakkai, Chooralmala, and Meppadi, and entire villages being washed away. The death toll stands at 215, though the number of missing people indicate that the real toll will be higher.

What are the possible causes?

Most experts are clear that there are a number of causative factors behind any landslide, both natural and anthropogenic. Almost half of Kerala's land area — 19,301 sq km or 49.7% of the total landmass — is prone to landslides, according to an assessment by the Geological Survey of India (GSI). The heavy rainfall in the region and the slope of the Western Ghats mean that Wayanad is uniquely vulnerable to landslides, and 31.54% of the district is highly susceptible, according to research at IIT-Delhi.

However, human factors have exacerbated the danger of a natural calamity; increasing construction and changes in crop patterns are among the possible culprits. The Wayanad region has become a tourist hotspot over the last few years, with homestays and monsoon tourism being the latest trends. Ecologist Madhav Gadgil has pointed to the construction of resorts and artificial lakes, as well as recently abandoned quarries, as among the developmental activities which should not have occurred in the sensitive zone. Land use changes which have occurred over a longer period of time, starting with the British-era tea plantations that surround the disaster site, are also potential factors, and have continued in the post-Independence era. A study on plantation-induced forest degradation in Wayanad, published in the International Journal of Environmental Research and Public Health in 2022, found that there has been a 62% reduction in forest cover between 1950 and 2018, coupled with a 1,800% increase in the area under plantation. Such monocropping leads to a loosening of the topsoil that was once held in place by the roots of a forest.

Climate change has also played a role, albeit an indirect one, leading to changes in rainfall patterns in the State. The warming of the Arabian Sea is allowing the formation of deep cloud systems, leading to extremely heavy rainfall over a shorter period, according to S. Abhilash, a senior scientist at the Cochin University of Science and Technology. In recent years, such heavy rainfall events have been increasing, even as the number of rainy days in the monsoon season has been decreasing. Despite the record 527 mm of rainfall that was recorded in Mundakkai over the 48 hours before the landslide, Wayanad has seen only normal rainfall averages during this monsoon, while Kerala as a whole has seen deficits, according to India Meteorological Department data. "What was once a cool, humid environment with year-round drizzles and monsoon rains, is turning into one marked by drier, hotter summers and intense downpours during the monsoons. This change has increased the risk of landslides. Dry soils absorb less water and heavy rainfalls cause run-offs that can lead to landslides, such as the ones we've seen this week," said Mariam Zachariah, a researcher at the Grantham Institute for Climate Change.

How can the Western Ghats be protected?

Mr. Gadgil led the high-profile Western Ghats Ecology Expert Panel, which submitted its report in 2011, recommending that the entire region of the Western Ghats, spanning 1,29,000 square km across six States, be declared an Ecologically Sensitive Zone (ESZ). It wanted the area to be divided



into three broad zones — ESZ 1, ESZ 2 and ESZ 3 — with strict restrictions on development to be imposed on the first two regions. All three taluks of Wayanad fell under ESZ 1, which recommended a ban on land use changes, a moratorium on mining and quarrying, limits on hydropower projects, no new railway lines or major roads, and strictly regulated minimal ecotourism. In fact, the village of Meppadi, which has been washed away, had been specifically spotlighted as one of 18 proposed ecologically sensitive localities in Kerala. However, the Gadgil panel report was rejected by all State governments, following a public backlash on the impact of the report on livelihoods and economic growth in the region.

A panel led by former ISRO chief, K. Kasturirangan, watered down some of the Gadgil report's recommendations, stipulating that only 37% of the Western Ghats were to be declared ecologically sensitive, though much of Wayanad still fell within the area to be protected. However, this report was not implemented either.

A draft notification on Western Ghats protection, first issued in March 2014, has remained in the draft stage for over a decade, with its sixth version being issued by the Union government just a day after the Wayanad landslide struck; a 2022 committee set up to incorporate States' concerns and balance the "conservation aspects of the disaster prone pristine ecosystem, and the rights, privileges, needs and developmental aspirations of the region" is yet to submit its report.

Were landslide warnings issued?

The IMD issues warnings for heavy rainfall, in a colour-coded system. However, in the week before the landslides, the alert was largely yellow, which does not call for action. It was only after the landslide occurred that a red alert was issued for July 30.

The GSI has been designated the nodal agency for landslide studies, and has been given the responsibility of evolving an early warning system and protocols for landslide risk reduction. However, this is still in the experimental stage and will take four or five more years to be ready for public use, a senior GSI official said. Regional landslide forecast bulletins have been issued to State and district authorities in Wayanad since the onset of the 2024 monsoon, but only predicted "low" probability on most days, with "moderate" probability predicted on July 30.

GADGIL COMMITTEE REPORT

— A landslide in Karnataka's Wayanad district that has claimed more than 300 lives has brought back into focus the 2011 Dr. Madhav Gadgil report and the K. Kasturirangan report on the conservation of the Western Ghats.

— In 2010, then Union Environment Minister Jairam Ramesh appointed the Western Ghats Ecology Expert Panel (WGEEP), to be chaired by ecologist Dr Madhav Gadgil. The commission submitted its 552-page report to the Centre in August 2011.

— The report recommended classifying 64 percent of the Western Ghats, spread over six states, into Ecologically Sensitive Zones called ESZ 1, ESZ 2 and ESZ 3. It also recommended designating the entire region as an Ecologically Sensitive Area (ESA).

— A major recommendation was a ban on growing single commercial crops like tea, coffee, cardamom, rubber, banana and pineapple, which have led to "fragmentation of forest, soil erosion, degradation of river ecosystems and toxic contamination of the environment".



— The Western Ghats are a 1,600-km-long mountain chain running the western coast of the country covering six states — Gujarat, Maharashtra, Goa, Tamil Nadu, Karnataka and Kerala. It has been accorded the World Heritage status by UNESCO.

— In August 2012, then Environment Minister Jayanthi Natarajan constituted a High-Level Working Group on Western Ghats under former Indian Space Research Organization (ISRO) chief Dr K Kasturirangan.

— While the Gadgil panel recommended 64 percent area in the Western Ghats, a report by a panel led by Dr K Kasturirangan notified only 37 percent of the area as ecologically sensitive.

HOW VICTIMS OF THE WAYANAD LANDSLIDES MAY EXPERIENCE 'CLIMATE TRAUMA'

In the pre-dawn hours of July 30, multiple landslides following heavy rains virtually flattened three villages in Wayanad district in Kerala. Two days later, as rescue operations continued in unceasing rain, the death toll had risen past 200. Photos from the area showed tired and shell-shocked people milling around, with little to show for the villages that once lay there. Tales of terror, trepidation, and trauma after climate-induced disasters aren't uncommon. For example, after the 2021 Chamoli floods, people reported being afraid to work at night. One media report quoted a 62-year-old woman dreaming that her son — buried under the debris from the flood — pleaded with her to "dig out his body".

Distressing dreams and flashbacks are well-known symptoms of post-traumatic stress disorder (PTSD), a mental health condition that often affects individuals who have recently experienced a distressing event. Climate-induced disasters aren't the only cause of a higher incidence of PTSD, but they pose unique challenges to people at risk of being affected by these disasters for two reasons: (i) unlike other natural disasters, climate-induced ones often get progressively worse, and (ii) these disasters unsettle people's daily lives in visceral, prolonged ways. Jyoti Mishra, associate professor of psychiatry at the University of California, San Diego, said residents of a climate change-hit place often face a dilemma: whether they should stay there and potentially face another disaster or leave the place even if they have sunk roots there.

Climate trauma

Experts told The Hindu that as climate-induced disasters become more frequent and more intense, they could even change the way people think.

In California, increasing aridity has sent the number of forest fires soaring. Dr. Mishra and her team investigated the mental-health impact of several fires here in 2018 and found people exposed to them had more symptoms of PTSD, major depressive disorder, and general anxiety disorder. Sanjay Kalra, an endocrinologist working in Karnal, Haryana, said three neurotransmitters are produced in response to stress: dopamine, adrenaline, and noradrenaline. In the short-term, these chemicals are secreted only intermittently, in response to stressors.

But when they are secreted continuously, the body's response becomes maladaptive. "As these chemicals are secreted 24/7 ... their levels remain so high and they remain high so continuously that they just lose their impact," Dr. Kalra said.

Thus an individual's ability to cope with stress drops significantly over time, leading to PTSD-like symptoms.



BILL SEEKS TO EXPAND NDMA ROLE, FAILS TO STRENGTHEN ITS STATUS

Last week, the government introduced a Bill in Parliament seeking to amend the Disaster Management Act, 2005. It proposes to make important changes in the Act, aimed mainly at improving the operational efficiencies in responding to a natural disaster.

— The Bill seeks to significantly expand the role and responsibilities of the National Disaster Management Authority (NDMA), especially in guiding state governments and organs of the Centre in dealing with disasters.

— The DM Act was enacted in the aftermath of the devastating 2004 tsunami — the idea for such legislation was in the works at least since the 1998 Odisha super cyclone.

— The Act led to the creation of the NDMA, SDMA at the state level, a National Disaster Response Force (NDRF), and a National Institute of Disaster Management (NIDM).

— The Act was followed by a National Disaster Management Policy in 2009 and a National Disaster Management Plan in 2016.

— Proposed amendments: Urban Disaster Management Authorities- The Bill recognises the special requirements of large metropolitan cities that often comprise multiple districts. In such cities — all state capitals and cities with a municipal corporation — would now also have an Urban Disaster Management Authority, headed by the municipal commissioner.

— Although most states have raised their disaster relief forces on the lines of NDRF over the years, an SDRF is not mandated in the 2005 Act. The size and capacity of the SDRFs in the states vary significantly. The Bill proposes to make it mandatory for every state to raise and maintain an SDRF.

— The Bill gives legal status to the NCMC, making it the nodal body to deal with disasters with “serious or national ramifications”.

— The Bill proposes that the NDMA should recommend guidelines for minimum standards of relief to be provided to people affected by disasters.

— The Bill seeks to include an important clarification about the definition of disasters regarding man-made causes.

— The amendment Bill legitimises the position of vice-president by allowing for the day-to-day functioning to be carried out by any Member designated by the chairperson or the vice-chairperson.

— Unaddressed issues: Considering its growing role and importance, it has been argued that NDMA be given more powers and elevated to the status of a government department, if not a full-fledged ministry in itself.

— The NDMA does not have any administrative financial powers. Routing every small decision through the Home Ministry is an inefficient and time-consuming process.

— The body is also severely short-staffed at the top, with just three members functioning.



For Your Information:

- The National Disaster Management Authority (NDMA) is India's apex statutory body for disaster management.
- The NDMA was formally constituted on 27th September 2006, by the Disaster Management Act, 2005.
- The Prime Minister is its chairperson and it has nine other members. One of the nine members is designated as Vice-Chairperson.

WCC TAG GIVES RARE CHANCE FOR KASHMIR CRAFTSMEN TO TRACE THEIR ROOTS, ENHANCE SKILLS

In June, the World Crafts Council (WCC) named Srinagar a World Craft City, one of now four in India, and among 60 around the globe.

WCC will hold a knowledge exchange programme for artisans from Kashmir with cities that influenced the craft aesthetic here centuries ago.

Kashmir, once a trading hub on the Silk Route, got cut-off from Persia and Central Asia after concretisation of borders post-1947. The WCC's move to include Srinagar has opened up a rare window to trace the centuries-old craft influences in the region.

"The WCC plans to bring together artisans with similar culture and specialisation, so that they benefit from each other, both culturally and technically. This is the only beginning," Mr. al-Qaddumi said.

According to the Department of Handicrafts, Srinagar is home to 20,822 craftsmen within the municipal limits of the city. The Directorate of Economics and Statistics suggested that the total production of handicraft-related goods in J&K stood at ₹2,650 crore in 2023.

Three others in the list

Jaipur, Mamallapuram, and Mysore are the other World Craft Cities in India. Internationally, Bukhara in Uzbekistan, Lalitpur in Nepal, Gualaceo in Equador, and La Bisbal d'Empordà in Spain are some of the cities. Five centuries ago, craftsmen from Iran travelled to Kashmir, bringing with them crafts such as zanzan, filigree, shiraz, chador, shab, and many more.

According to an Indian National Trust for Art and Cultural Heritage-Kashmir (INTACH-Kashmir) report submitted to the WCC earlier this year, Srinagar, the summer capital of J&K, is one of the ancient cities of South Asia with a continuously recorded history of about 1,500 years.

"Located on the historic Shakra-e-Abresham (Silk Route) the city generated a wealth of ideas related to arts and crafts and facilitated exchange of activities in trade, cultural practices, and scientific knowledge. Historically, the city has a legacy as a trade-based land, whose products like shawls and carpets have been internationally recognised," Saleem Beg, INTACH-Kashmir chapter, said.

He said Srinagar represented a unique urban setting showcasing a marked synthesis between the built heritage, the natural surrounding landscape, and their creative representation in the city's associated crafts.



Rich tradition

“The brand ‘Cashmere’ and the motif paisley are internationally recognized symbols of the city’s distinct artistic identity. This rich tradition survives today in the form of 10 different crafts, seven of which have received the unique Geographical Indication (GI) recognition,” Mr. Beg said.

According to the INTACH report, the carpet history of Kashmir dates back to the period of the Sufi Saint and scholar, Sayyid Ali Hamdani of Persia who visited Srinagar in the late 14th century AD.

34 TIGERS DEATHS IN BANDHAVGARH, NINE MORE IN SHAHDOL: SIT FLAGS LAPSES

Insufficient investigation into possible poaching cases, lapses during postmortem, and medical negligence leading to deaths — these are some of the red flags raised by a Special Investigation Team (SIT) that was looking into the deaths of 43 tigers between 2021 and 2023 in Madhya Pradesh’s Bandhavgarh Tiger Reserve (34 deaths) and Shahdol Forest Circle (9 deaths).

— According to the report, there appeared to be insufficient investigation into at least 10 cases of tiger deaths. There was a “lack of interest by higher authorities and Forest Range Officers in discharging their duties, resulting in arrests in only two out of five cases where unnatural causes of death were found/body parts were seized,” it said, while flagging a “disinterest in recovering missing body parts (10 out of 34 cases) from the tiger carcasses”.

— In many cases where tigers were found dead due to electrocution, there was an “absence of various vital evidences (sic) like mobile forensics, CDR, electric trip data in the investigation of the cases and no efforts were made to extract information on revenue and private land ownership”, the report says.

— It also said that in 17 cases, there was a tendency to portray tiger deaths as a result of infighting without detailed investigation. The SIT had been formed on the orders of the state’s Chief Wildlife Warden to look into the high number of tiger deaths in the two areas.

For Your Information:

— Project Tiger was launched by the Central government on April 1, 1973, in a bid to promote conservation of the tiger. The programme came at a time when India’s tiger population was rapidly dwindling.

— To tackle the problem of hunting and poaching of not just tigers but also other animals and birds, then Prime Minister Indira Gandhi promulgated the Wildlife Protection Act in 1972. A year later, after a task force urged the government to create a chain of reserves dedicated to tiger preservation, Indira unveiled Project Tiger.

CHHATTISGARH TO GET NEW TIGER RESERVE AMID DWINDLING BIG CAT POPULATION

With its tiger population plunging in recent years, Chhattisgarh Wednesday cleared a long-pending proposal to notify a new tiger reserve – the third largest in the country.

— The Guru Ghasidas-Tamor Pingla Tiger Reserve, which integrates an existing national park with a wildlife sanctuary, is Chhattisgarh’s fourth reserve for the big cats. It spans 2,829 square kilometres across four northern districts of the state.



— The decision comes after the Chhattisgarh High Court, while hearing a PIL on July 15, granted four weeks to the state government to clear its stand on declaring that area a tiger reserve.

— On Wednesday, the state cabinet merged the regions of the Guru Ghasidas National Park and the Tamor Pingla Sanctuary, located in the districts of Manendragarh-Chirmiri-Bharatpur, Koriya, Surajpur and Balrampur, to create the new reserve.

— Andhra Pradesh's Nagarjunasagar Srisaillam Tiger Reserve is the country's largest tiger reserve, covering 3,296.31 sq km. Manas Tiger Reserve in Assam is the second largest with an area of 2,837.1 sq km. Both have 58 tigers.

AFTER 61 YEARS, FOUR-RINGED BUTTERFLY RESURFACES IN INDIA

A policeman is one of the four authors of the paper, published by the Bombay Natural History Society (BNHS), describing the great four-ring (Ypthima cantliei), a species of Satyrinae butterfly. The butterfly was recorded in 2018 from the Namdapha National Park by Roshan Upadhaya, a member of the Arunachal Pradesh Police, Monsoon Jyoti Gogoi of the BNHS, and Renu Gogoi and Rezina Ahmed of the Guwahati-based Cotton University's Department of Zoology.

Namdapha, straddling 1,985 sq. km. of Changlang district in Arunachal Pradesh, is India's easternmost tiger reserve bordering Myanmar. The park has an elevation ranging from 298.7 metres above the mean sea level to 4,498.8 metres.

"The great four-ring was photographed during a survey to document the butterfly diversity in the Miao range of the Namdapha National Park during 2018-19. It was identified based on general morphological patterns and habitat," Mr. Upadhaya told The Hindu on Saturday. "Little is known about the current distribution or population of this species, which was last reported in 1957 from (eastern) Assam's Margherita, 61 years before our documentation," he said.

Ypthima is considered a rich genus of the family Nymphalidae which has some 6,000 species of butterflies. Of the 35 Ypthima species recorded in India, 23 have been reported from the northeast.

The highest Ypthima diversity is in China, particularly in the Yunnan and Sichuan. The diversity is also vast in Nepal, Bhutan, and Myanmar. The species has dull brown-grey wings with three yellow-ringed single eye spots (ocelli) on its hind wing and a large bi-pupilled apical ocellus obscurely ringed with yellow on the forewing above.

THE UN-TOAD STORY

A single frog can dispense with 100 malaria-dengue-infected mosquitoes in a single night. Not to mention, tadpoles-devouring mosquito larvae. That and the fact that they are very important bio-indicators, their presence or absence signalling the state of the environment.

— "Goa was infamous for the trade in frog legs was banned and frogs attained a position in Schedule II of the Wildlife Protection Act (1972). But the use of pesticides and herbicides (and a nasty virus) has decimated their population and caused malformed development in many species."

— "Frog legs are still consumed abroad: Indonesia and China are top exporters, France and other European countries and the U S top importers. This outside local consumption: all told some 3.2 billion frog legs are consumed globally every year."



— “They really are pretty unique amphibians; all 7600+ species of them, comprising some 88 per cent of all amphibian species. In India, we’ve only as yet counted about 380 species (250 from the Western Ghats alone), which means too few scientists are looking out for them!”

— “Their skin is usually moist and slippery — to prevent dehydration and help escape predators. They wriggle out of their skin periodically and eat it. The skin may also be highly toxic as is that of the Amazon’s famous poison dart frogs. These imbibe the poison from the invertebrates they eat, which may get it from poisonous plants that they consume.

— “Frogs and tadpoles are usually carnivorous: the Indian bullfrog may enjoy insects, small mammals and birds, and tadpoles are known to feast on one another.”

RUINING THE MAJESTIC RUINS

Hampi, located in the hilly region of Vijayanagara district in Karnataka, is now a UNESCO World Heritage Site. Dotted with monuments built during the Vijayanagara empire that ruled between AD 1336 and 1570, its landscape is made even more fascinating by the massive boulders that encompass the terrain.

It served as the capital of the mighty Vijayanagara empire. This historic site has multiple places of importance including the Virupaksha temple, Lotus Mahal, the queens’ bathing area, musical pillars, a stone chariot, and an elephant stable, all of which tell stories of the bygone era.

The Virupaksha temple is regarded as the most sacred temple at Hampi. The Tungabhadra river courses around the rocky terrain.

Tourists, history enthusiasts and archaeologists from all over the world come here, especially in the monsoon, as clouds enhance the beauty of the place and the weather makes the long treks less exhausting.

However, a matter of concern is regarding stone quarrying activity that one witnesses around the place. One can see men chipping away at the rocks near Bukkasagara between Hampi and Anegundi. Anegundi, also called as Kishkinda, has many historical monuments as well. Tourists hear explosives being used to blast the rocks, leaving them worried about the safety of the heritage site. Environmentalists express concern that even after the signboard put up by the Forest Department which says ‘Tungabhadra Otter Conservation Reserve’, quarrying is happening in surrounding areas.

HUMAYUN’S TOMB COMPLEX

— The first ‘sunken’ museum of India has been opened at the Humayun’s Tomb Complex. Sunken museums are nothing but museums that take visitors underground to present their exhibits.

— The museum, whose layout is inspired by the medieval ‘baolis’, or traditional water tanks, showcases the legacy of Mughal emperor Humayun, including lesser-known facets of his life, and the heritage of the Nizamuddin area over the last seven centuries.

— The tomb of Humayun was built by his widow, Biga Begum (Hajji Begum), in 1569-70, 14 years after his death, according to a portal of the Ministry of Culture. It is a UNESCO World Heritage site.



EXPRESS VIEW ON BUDDHADEB BHATTACHARYA: THE TRAGIC REFORMER

Can communism coexist with a liberalised economy? Buddhadeb Bhattacharya, the last Left chief minister of West Bengal, believed it was possible. In his second term in 2006, riding on the CPM-led Left Front's resounding win of 235 out of 294 Assembly seats, Bhattacharya, who died on August 8 at 80, had hoped to usher his state into a new era of reforms and job creation. The modernisation of government schools in small towns, investments in IT and plans for a SEZ in Nandigram, the Nano plant in Singur and a steel plant in Salboni, were part of that vision.

What he had not accounted for was that these new beginnings would be overtaken by endings more momentous: Because of a Politburo that would not back his prescience; because of a party so ossified that it refused to recognise the danger from a street fighter who would capitalise on its arrogance and lead a rainbow social coalition to rout it in 2011, winning 227 seats. The Left in West Bengal has never recovered from that blow. In this year's Lok Sabha election, which it fought in alliance with the Congress, despite fielding several young first-timers, it drew a blank.

As West Bengal's CM between 2000 and 2011, Bhattacharya took over the reins of a predominantly agrarian state in which enterprise was shackled by government controls and diktats of Left-controlled unions. To naysayers who accused him of neglecting farmers, Bhattacharya would say, "Krishi amader bhitti, shilpa amader bhabishyat," (agriculture remains our foundation, but industry is our future).

The perestroika he envisaged, however, remained incomplete, and Bhattacharya has acquired the infamy, perhaps unfairly, of presiding over the decline of CPM in West Bengal. In the second volume of his memoir, *Phire Dekha (Looking Back)*, Bhattacharya asked himself the question that stalks hindsight: Given a chance, what would he have done differently? The answer was Nandigram. He deeply regretted the death of 14 protesters from police firing, that tipping point in the anti-land acquisition movement that propelled Mamata Banerjee to centrestage. But there was also a deeper sadness at being let down by the refusal of others to see that Bengal needed industry.

A death is an occasion for assessment, of measuring a public personality against a broader canvas of history. Bhattacharya will pass that test as an upright politician stymied by a moribund system, an intellectual who reveled in the works of Gabriel Garcia Marquez and the plays and poetry of Vladimir Mayakovsky; a cineaste whose contributions include one of the finest international film festivals in the country.

His predicament was creating a private investment-friendly ecosystem in a communist-run state — an imperative postponed for more than two decades by the Left Front under Jyoti Basu. Bhattacharya, like Basu, was a *bhadralok*. But unlike his cigar-smoking aristocratic predecessor, he was not weighed down by ideological shibboleths. It both liberated him, and wore him down.

YAMINI KRISHNAMURTHY: BORN TO DANCE

In filmmaker K Viswanath's National Award-winning *Sagara Sangamam* (1983), Balakrishna (Kamal Haasan), a classical dancer living in penury exclaims at the name Yamini Krishnamurthy in a dance brochure. The reference that reached the medium of popular culture, came from the '60s, '70s and '80s, when dance found the proscenium besides status and reputation. Young girls and boys and dance aficionados filled up auditoriums to watch Krishnamurthy, and marvel at the dazzling precision of her line and form. The dancer who mastered Bharatnatyam, Kuchipudi and Odissi died on August 3.



Krishnamurthy was born into a family of scholars in Madanapalle, Andhra Pradesh. Her interest in dance came from the stone sculptures depicting deities and legends in the 2,000-year-old Thillai Nataraja Temple in Tamil Nadu's Chidambaram, where the family lived later. Her father enrolled her in Kalakshetra under the aegis of Rukmini Devi Arundale, where she learned the grammar of the art form. But since when has grammar been enough in classical dance? As Krishnamurthy would say, "you also need poetry", which meant that you needed expression and style. She needed a greater dimension and she found that under varied nattuvanars such as Elappa Pillai and Kitappa Pillai later.

When Ashoka Hotel was inaugurated in Delhi, then Prime Minister Jawaharlal Nehru was keen that it have a robust cultural wing. After she arrived in Delhi on then-Union Minister Karan Singh's invite, Krishnamurthy's fast-paced jatis, intricate footwork and glamorous presence took Delhi by storm. She was among artists such as Pt Ravi Shankar, Ustad Allah Rakha and Ustad Bismillah Khan, who travelled globally, took Indian culture places. Krishnamurthy was honoured with the Padma Shri in 1968, more honours followed. She held the title of Asthana Nartaki (resident dancer) of the 2,000-year Tirupati Tirumala. Krishnamurthy's death marks an epochal shift in the world of classical dance. She will remain its breakthrough moment.

SARA ABRAHAM, DOYENNE OF INDIAN ART, PASSES AWAY

Born into the distinguished family of Chalakuzhy Paulose Matthen and his wife, Eliamma Matthen, in Travancore, Kerala, as it was then known, Sara was one of eight children.

An early marriage to P.Z. Abraham allowed her the privilege of living in Bombay where she had perhaps the most exhilarating encounter with the young M.F. Husain. It was a time when modern Indian art and a new generation of art collectors were just beginning to recognise the explosion of creativity in the country.

It could not have been a better moment for Sara with her unique vision to be able to nurture and create what would become her journey of discovery. The Kala Yatra, as she named it, became a moveable feast of contemporary Indian Art in all its manifold variety.

Sara Abraham spent her last day playing 'Single Patience' surrounded by her Kala Yatra friends framed across the walls at her home in Chennai, not far from the Adyar river.

DreamIAS



BUSINESS & ECONOMICS

‘SLOW PACE A WORRY, BIMSTEC MEMBERS NEED TO FIND NEW PATHWAYS FOR FTA’

Expressing concern over the slow pace of talks for a trade agreement with the seven member countries of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) bloc, Commerce Minister Piyush Goyal on Wednesday said that there is a need to re-evaluate the approach to boost trade within the region.

The BIMSTEC bloc includes seven countries: Bangladesh, Bhutan, Nepal, India, Sri Lanka, Myanmar, and Thailand. The bloc has been negotiating a proposed Free Trade Agreement (FTA) since 2004, with 22 rounds of talks held so far including the last round that was held in 2018.

INDIA ASSURES TAIWAN OF POLICY STABILITY IN SEMICONDUCTOR SECTOR

As Taiwanese businesses and government officials take a cautious approach towards India's semiconductor ambitions, New Delhi has mobilised officials to the island territory bearing a key message: an explicit assurance of policy stability.

— The Indian Express has learnt that senior officials from the IT Ministry have met with industry executives in Taipei and government officials, to assure them of policy stability, especially with regard to changes in rules governing imports and tweaks in customs duties on inputs.

— The first commercial fab (Fabs are the highly-specialised semiconductor manufacturing facilities that print the miniaturised integrated circuits from the chip design onto the silicon wafers.) in India, which is being opened by Tata Electronics in Gujarat, will start operations due to technology support from Taiwanese chipmaker PSMC. But, PSMC does not have any equity stake in the operations as its partnership is limited to a technology collaboration. It is also one of Taiwan's smaller chipmakers that fabricates legacy logic and memory chips. The reason the company has taken this conservative approach is because key players want to play it safe.

— New Delhi hopes that with constant engagement with Taiwanese chip firms and the government, there could be a possibility in the future that some companies enter the Indian market with more skin in the game, and take equity partnership in a chip joint venture with an Indian company, or open up an independent operation in the country.

— There is a major reason behind New Delhi's outreach to Taiwanese officials: the strategic island territory is home to some of the leading names in chipmaking....More than 90 per cent of the world's most advanced chips required for almost all electronic equipment such as smartphones, car components, data centres, fighter jets and AI technologies, are made in Taiwan.

— India's chip incentive plans are focused on boosting all three aspects of the semiconductor ecosystem – packaging, assembly and testing facilities (called ATMP and OSAT units), and full-scale foundries that can manufacture chips

— From a Taiwanese perspective, there are yawning gaps in the policy support extended by New Delhi, which is a major reason firms from the territory are yet to commit serious investments in India. —



RUSSIA DOMINATES INDIA'S OIL IMPORTS IN JULY ON STRONG URALS, ESPO FLOWS

India's Russian oil imports stayed robust in July, registering a slight month-over-month growth to the highest level in over a year powered by strong flows of Moscow's key crude grade Urals and an uptick in import of ESPO crude, as per oil tanker tracking data and industry experts.

— Indian refiners imported a total of 2.08 million barrels per day (bpd) of Russian crude oil in July, the highest since June of last year, when Russian crude imports were at near-record high levels, as per provisional ship-tracking data from commodity market analytics firm Kpler.

— India's Russian oil imports in July were around a per cent higher sequentially, and accounted for as much as 43 per cent of India's total oil imports of 4.82 million bpd. Russia's share was almost as much as the cumulative market share of the next four large suppliers—Iraq, Saudi Arabia, the United Arab Emirates (UAE), and the United States (US). July was the seventh straight month of sequential growth in India's Russian oil imports.

— Additional availability of Russian crude for export markets due to Ukrainian drone strikes on Russian refinery infrastructure and sizable price differential vis-à-vis competing Middle Eastern crude grades led to higher flows of Russian oil to India in recent months. The rise in India's import of discounted Russian oil over the past few months has hit flows from Saudi Arabia the most.

For Your Information:

— Urals, a medium-sour crude, is the mainstay of India's Russian oil imports. Evidently, the price differential between Urals and competing crude grades from India's traditional West Asian suppliers was significant enough for Indian refiners to prefer the Russian grade.

— As the world's third-largest consumer of crude oil with a high import dependency level of over 85 per cent, India is extremely sensitive to oil prices.

— Prior to the war in Ukraine, Iraq and Saudi Arabia were the top two suppliers of crude oil to India. But as the West started weaning itself off Russian energy supplies following Moscow's February 2022 invasion of Ukraine, Russia started offering discounts on its crude and Indian refiners started snapping up the discounted barrels.

PORTAL TO EASE ENTRY OF CHINESE TECHNICIANS INTO INDIA HAS BEGUN FUNCTIONING: OFFICIAL

A portal to facilitate the approval of short-term business visas for Chinese technicians, essential for operationalising production units and boosting output in sectors under the government's flagship Production Linked Incentive (PLI) scheme, has begun functioning, a senior government official said on Wednesday.

The Indian Express in June has reported that the domestic industry flagged concerns over delays in fulfilling export orders due to the hold-up in granting visas to Chinese technicians. Several companies had been importing machinery from China but faced production delays due to visa delays that primarily began after the Galwan clash in 2020.

The industry relies on Chinese professionals due to its heavy dependence on China for crucial parts in most electrical and electronic segments. Official data shows that out of nearly \$100 billion



worth of imports from China, nearly 60 per cent comprised engineering and electronic items, which are also key to fulfilling India's export orders.

Industry sources said that several manufacturers are often forced to move manufacturing to alternative locations where there are no such restrictions. They added that Chinese technicians are sought after by Indian manufacturers as they are more affordable than technicians from other Western or even Southeast Asian countries.

The border standoff after the Galwan clash in 2020 led to several government measures aimed at limiting Chinese influence on the Indian economy. The government also amended the FDI policy under Press Note 3 (PN3), bringing investments from land-bordering countries under the government route.

According to official figures, India approved only a quarter of the total 435 foreign direct investment applications from China up to June last year since the modification in Press Note 3 was introduced in April 2020. However, China contributes only a fraction of the total FDI equity inflows into the country. China stands at the 20th position with only a 0.43 per cent share or \$2.45 billion in total FDI equity inflow reported in India from April 2000 to December 2021, as per the Commerce and Industry Ministry.

The Economic Survey last month advocated attracting investments from Chinese companies to boost exports. The Survey suggested this change in stance as countries such as Mexico, Vietnam, Taiwan, and Korea are benefiting from the China-plus-one phenomenon pursued by Western firms, with a simultaneous rise in investment from China.

"To boost Indian manufacturing and integrate India into the global supply chain, it is inevitable that India connects itself to China's supply chain. Whether we do so by relying solely on imports or partially through Chinese investments is a choice that India has to make," the Survey stated.

India faces two choices to benefit from the China-plus-one strategy: it can integrate into China's supply chain or promote foreign direct investment (FDI) from China. Among these choices, focusing on FDI from China seems more promising for boosting India's exports to the US, similar to how East Asian economies did in the past, the Survey emphasised.

'UP TO 85% EMPLOYED YOUTH IN RURAL AREAS SEEK TO CHANGE JOB'

Between 70-85 per cent of currently employed youth in rural areas desire to change their jobs, the 'State of Rural Youth Employment Report 2024' has found. The report also indicated that agriculture and self-employment, traditionally key sources of rural labour absorption, are no longer seen as aspirational career paths by many young people in rural India.

— The report, prepared by the Development Intelligence Unit (DUI), a joint initiative of Transform Rural India (TRI) and Sambodhi Research, and the Global Development Incubator (GDI), surveyed 5,169 'opportunity youth' across 21 states.

— It defines opportunity youth as those who are either unemployed or underemployed, who collectively account for 70 per cent of all rural youth in India.

— Of those currently employed rural youth who wish to change jobs, a majority preferred running small businesses, including manufacturing, retail, and trading, or seeking salaried jobs in public and private sectors.



— Among those interested in starting businesses, 90 per cent male and 50 per cent female respondents said they needed support in accessing seed capital, while only 10 per cent said they needed a full training course.

— At the same time, over 60 per cent male and 70 per cent female respondents said they preferred to find work in or close to their villages, even when income was 20-30 per cent lower, highlighting the need to significantly ramp up employment opportunities in and around rural areas.

For Your Information:

— Policymakers should study whether well-intended welfare schemes might be deterring India's youth from seeking employment, Chief Economic Advisor V Anantha Nageswaran said in his keynote address at the launch of 'The State of Rural Youth Employment Report 2024'.

— Drawing from studies conducted in the United States and Europe, Nageswaran noted that welfare schemes may have "a certain behavioural consequence in terms of willingness to offer the supply of labour on the part of the youth".

LOK SABHA PASSES FINANCE BILL, AMENDS PROVISION ON LTCG TAX

Parliamentary approval for the 2024-25 Budget was completed Thursday with Rajya Sabha returning the relevant pieces of legislation to Lok Sabha.

Rajya Sabha returned the appropriation and finance Bills for 2024-2025 after Finance Minister Nirmala Sitharaman responded to the Opposition's attack that the Budget was anti-middle class, saying the government had reduced the burden on the middle class.

— Replying to the discussion on the three Bills, the Finance Minister said the effective capital expenditure this year would be `15.02 lakh crore, an increase of 18% from 2023-2024. She said the increasing capital expenditure since 2020 had a bearing on private investment, consumption and exports.

— She said the government has simplified taxation.

— "Compared with very many developed economies, which have actually increased the tax rates, despite the pressure from Covid times, we have actually reduced the burden on the middle class substantially," the Minister said.

For Your Information:

— The Union Budget is more technically called the Annual Financial Statement. Any budget essentially provides three big details.

— One, the total amount of money that the government will raise in the coming year; this is called the total receipts.

— Two, the total amount of money it will spend; this is called the total expenditure.

— Three, the total amount of money it will borrow from the market to plug the gap between what it spends and what it earns; this is referred to as the fiscal deficit.



FOR TAXPAYERS, A WELCOME EASING

In the Union Budget 2024-25, Finance Minister Nirmala Sitharaman announced a review of the Income Tax Act, 1961. The rationale for this exercise was straightforward — to make the Act simpler to “read and understand”, thus helping bring down tax disputes and consequent litigation. The budget took a step in this direction by proposing simplification of provisions for reassessment and capital gains taxation, among others. There was a need to reexamine the capital gains tax framework considering the differences in both the tax rates as well as the holding periods for determination of long-term gains across asset classes such as equities, debt, real estate etc. The budget had proposed levying a tax of 12.5 per cent on long-term capital gains on all financial and non-financial assets. However, it also proposed to eliminate the benefit of indexation that was available to investors for property, gold and unlisted assets for the purpose of estimating long-term capital gains. While this was done to “ease computation of capital gains for the taxpayer and the tax administration”, the proposal was met with widespread criticism. After first defending the proposal on grounds that the lower tax rate of 12.5 per cent, from 20 per cent, compensates for the removal of the indexation benefit, the government has now changed tack, heeding the concerns of taxpayers.

Taxpayers now have the option to pay long-term capital gains tax of 20 per cent with indexation benefits on the sale of a property that has been acquired before July 23, 2024. Indexation refers to the adjustment of the purchase price of an asset based on the rate of inflation over the period that it has been held by the investor. With this option now available, all purchases before the date of the budget presentation have been grandfathered. Investors, though, can also choose the option proposed in the budget of paying a lower tax rate of 12.5 per cent, but, without availing the indexation benefit. This framework now provides investors the option of being able to select the tax structure which leads to a lower tax liability for them.

Over the years, the government has taken steps to ease the burden on ordinary taxpayers. For instance, in order to reduce tax uncertainty and disputes, the recent budget has said that an assessment can only be reopened beyond three years if the “escaped income” is Rs 50 lakh or more. But, more needs to be done. The review of the IT Act, which is to be completed in six months, should examine the contentious sections and aim to address the areas of disputes.

ELECTION OVERHANG

Production in India’s eight core infrastructure sectors remained largely dampened by the impact of a slowdown in state spending on public works in June, when the general election ended in the early part of the month leading to the formation of a new government at the Centre. The heatwaves that had impacted a wide range of economic activity in the country’s northern and western parts in May, extended into June, adding to the overall slowdown in industrial production. Provisional data on the Index of Eight Core Industries (ICI) released by the Commerce and Industry Ministry on July 31 show output in five of the sectors suffered either sharp decelerations in growth or contracted from the year-earlier period, resulting in overall core sector growth slowing to a 20-month low of 4%. While the output of refinery products, which at 28% has the heaviest weight on the ICI, contracted year-on-year for the first time in five months, and shrank by 1.5%, electricity generation declined by 3.6% from May’s all-time high level. The YoY expansion in the key electricity sector, which has the second-heaviest weight of about 20%, almost halved in pace to 7.7%, from May’s 13.7%, as the start of monsoon rains in some parts of the country helped ease power demand. However, June’s debilitating heatwaves, which the India Meteorological



Department pegged at a 14-year high, sapped demand for steel as construction activity struggled to regain traction amid the scorching temperatures. Steel output slid 4% from the preceding month, depressing the YoY growth to just 2.7% following May's 6.8% pace. Coal offered the silver lining, as output growth accelerated to 14.8% in June, from May's 10.2%.

The more contemporaneous private survey-based HSBC India Manufacturing Purchasing Managers' Index (PMI) for July appears to signal that manufacturing activity at a broader level eased marginally last month. Slightly softer increases in new orders and output resulted in July's PMI easing to 58.1, from 58.3 in June, the survey of purchasing managers at about 400 manufacturers by S&P Global shows. However, more than the marginal slowing in manufacturing activity, the PMI survey's truly disconcerting finding is that a significant strengthening in input costs led manufacturers to raise selling prices at the steepest rate in almost 11 years. With goods producers reporting having paid more for coal, packaging, paper, rubber and steel, the outlook for broader inflation — both at the wholesale and retail levels — is far from reassuring. The Reserve Bank of India's Monetary Policy Committee, which will meet to review its interest rate stance this week, has its task cut out. With clear signs that price pressures are broadening beyond food, policymakers can ill-afford to drop their guard in the battle to tame inflation.

REASSURING RESOLVE

The RBI's Monetary Policy Committee (MPC) has for a ninth straight meeting chosen to keep benchmark interest rates unchanged as it continues to battle retail inflation that has stubbornly stayed above its medium-term target of 4% for 57 months and is beginning to undermine consumer confidence. Laying out the rationale, RBI Governor Shaktikanta Das was emphatic that there was no room for complacency given the risks that persistently elevated food price pressures posed to households' inflation expectations and broader monetary policy credibility. Elevated food prices, he stressed, had not only slowed disinflation in the April-June quarter but had also extended their momentum into July with high frequency food price data pointing to sizeable month-on-month increases in key vegetable prices. Citing Department of Consumer Affairs data, he said tomato prices had surged 62% sequentially, while onion had become almost 23% costlier than in June and potato prices had increased 18%. Food prices, with a weight of about 46% in the overall Consumer Price Index, could not afford to be overlooked, not just for their impact on headline inflation but far more significantly because consumers related the most to the impact food prices had on monthly household budgets. He indicated, without explicitly referencing it, that a suggestion in the Economic Survey urging policymakers to consider delinking food prices from the inflation targeting framework made little sense in the circumstances.

The MPC, which voted by a 4-2 majority to hold interest rates and keep the policy stance focused on the withdrawal of accommodation to ensure that inflation aligns to the target, also raised its projection for headline retail inflation in the July-September quarter to 4.4%, 60 basis points higher than the 3.8% pace projected in June. The rate panel also posited slightly faster inflation in the third fiscal quarter than it had forecast previously, lifting the projection by 10 basis points to 4.7%, in a clear sign that the near-term inflation outlook appears less reassuring than it did just two months ago. And while Mr. Das noted that, in June, vegetable prices had contributed about 35% to headline inflation, the Centre for Monitoring Indian Economy, in an analysis, forecast price pressures in vegetables to 'sustain well into the festive season through till early November', adding pressure on retail headline inflation. Core inflation may also have bottomed out according to the MPC, which flagged the risks of spillover from food prices, as well as the impact mobile tariff



revisions may have on broader non-food inflation. Policymakers hearteningly reiterated the truism that without ensuring enduring price stability, growth may at best be tenuous.

CAN'T IGNORE FOOD INFLATION PRESSURES: DAS DIFFERS FROM SURVEY IDEA

In the Economic Survey for 2023-24, its author Chief Economic Advisor V Anantha Nageswaran made a case for excluding food prices from headline inflation, since food prices were keeping the CPI-based (Consumer Price Index) inflation high and delaying a cut in interest rates by the Reserve Bank of India. But RBI Governor Shaktikanta Das differed Thursday and said food inflation pressures cannot be ignored given the high share of food in the consumption basket.

— “With the high share of food in the consumption basket, food inflation pressures cannot be ignored,” Governor Das said after the RBI’s Monetary Policy Committee (MPC) left the main policy instrument, the Repo rate, unchanged at 6.5 per cent for the ninth consecutive time as “persisting high food inflation” continued to remain a risk.

— Food inflation, with a weight of around 46 per cent in the consumer price index (CPI) basket, contributed to more than 75 per cent of headline inflation in May and June.

— Under the flexible inflation-targeting regime, the RBI has to maintain CPI in the 2-6 per cent range. It has set a target to bring down inflation to 4 per cent on a durable basis. Headline

— Das said the domestic economic activity continues to be resilient. Domestic growth is holding up well on the back of steady urban consumption and improving rural consumption, coupled with strong investment demand.

— On the demand side, household consumption is supported by a turnaround in rural demand and steady discretionary spending in urban areas, he said.

“Food inflation is influenced by climatic factors and is beyond the control of the central bank. However, it cannot ignore food inflation as it has a strong bearing on household inflationary expectations, which in turn can feed into actual inflation. This is what makes RBI’s future policy uncertain and complex.”

— “Interestingly, the latest Economic Survey suggested that the MPC should consider targeting CPI inflation excluding food prices. The share of food and beverage in India’s CPI basket is much higher than developed countries (15 per cent in the US and 20 per cent in the EU) or even emerging economies like Brazil, China and South Africa (weight ranges between 20-25 per cent).”

— “It is relatively easier for developed countries to have an inflation-targeting monetary policy given the low share of food in the inflation basket, but it is challenging for India. This is because food prices are volatile and influenced by weather conditions, making it challenging to have monetary policy targeted around CPI inflation (including food). Monetary policy generally affects demand-side factors and is somewhat ineffective in controlling supply-driven food inflation.”

— “Going forward, the RBI will continue to watch trends in inflation. The direction of food inflation would have a strong bearing on RBI’s future policy decisions. It is critical for the RBI to assess what part of food inflation could be transient.”



RBI TO CREATE REPOSITORY OF LENDING APPS

The Reserve Bank of India has decided to create a public repository of digital lending apps (DLAs) deployed by the regulated entities (REs) in order to aid the customers in verifying the claim of DLAs' association with regulated entities like banks and avoid illegal apps.

The repository will be based on data submitted by the REs (without any intervention by the RBI) directly to the repository and will get updated as and when the REs report the details — addition of new DLAs or deletion of any existing DLA. This data will be available on the RBI's website, it said.

The repository will enable borrowers in identifying whether the lending app is illegal or legal.

The RBI issued guidelines on digital lending addressing protection of customers interest, data privacy, concerns on interest rates and recovery practices and mis-selling on September 2, 2022. However, media reports have highlighted continued presence of unscrupulous players in digital lending who falsely claim their association with RBI regulated entities (REs).

As per the findings of an RBI Working Group, as many as 600 out of 1100 lending apps available for Indian Android users across 80 application stores are illegal apps. And as the number of lending apps grows, this trend would spike, since a user downloading a lending app cannot identify if the app is legitimate or not.

It is also likely that several copycat apps and websites will mushroom across the internet. The working group set up by the RBI had proposed stringent norms for digital lenders, including a separate legislation to prevent illegal digital lending activities.

Over the last five years, thousands of people have fallen prey to predatory loan apps in the absence of any regulations, even suffered sexual harassment and ended up giving extortion money to loan recovery agents.

In September 2022, the RBI came out with guidelines on digital lending aimed at protecting customers from unethical business practices, such as mis-selling, breach of data privacy, unfair business conduct, charging of exorbitant interest rates, adopted by digital lenders.

The RBI asked the regulated entities to ensure that Lending Service Providers (LSPs) and DLAs comply with the guidelines. As per the guidelines, the regulated entities will have to disclose upfront the rate charged to the borrower of a digital loan, ensure that borrowers are aware of the products at the time of on-boarding and capture the economic profile of the borrowers before offering the loans.

For Your Information:

— The Reserve Bank of India has proposed to set up a Digital Payments Intelligence Platform which will harness advanced technologies to mitigate payment fraud risks.

— Domestic payment frauds jumped by 70.64 per cent to Rs 2,604 crore during the six-month period ended March 2024 from Rs 1,526 crore in the same period of last year. The volume of frauds also rose to 15.51 lakh during the March 2024 period from 11.5 lakh in the previous six-month period, RBI data shows.



EXPLAINED: SEBI'S PROPOSED MEASURES TO CURB F&O SPECULATION

Capital markets regulator, Securities and Exchange Board of India (SEBI) on Tuesday (July 30) proposed a series of measures to curtail speculative trading in the index derivatives segment. This comes amidst concerns about an exponential rise in the volume of trade in the futures and options (F&O) segment, particularly by individual investors.

The proposed steps aim at enhancing investor protection and promoting market stability in derivative markets. We explain.

What are the different types of derivatives?

Derivatives are essentially financial contracts that derive their value from the underlying asset, such as stocks, commodities, and currencies. Index derivatives therefore derive their value from the underlying index.

Futures and options are two types of derivatives where investors, based on their expectation of future price movement, enter into a contract to buy or sell the asset in 'lots' or multiple units of the asset, by paying a small margin amount.

A futures contract obliges its buyer to purchase the underlying asset at the predetermined price on a specified date. In contrast, an options contract allows its investor the right but not the obligation to trade the underlying assets as stipulated at a specific price on the specified date.

What measures have the SEBI proposed?

According to SEBI, derivatives markets assist in better price discovery, help improve market liquidity and allow investors to manage their risks better. The following measures aim to ensure sustained capital formation by shielding against bursts of speculative hyperactivity.

Minimum contract size

SEBI has recommended to increase the minimum contract size for index derivatives contract between Rs 15 lakh to Rs 20 lakh. This, after six months, can be increased between the intervals of Rs 20 lakh to Rs 30 lakh. At present, the minimum contract size requirement for derivative contracts is in between Rs 5 lakh to Rs 10 lakh.

Why have these measures been proposed?

In the Union Budget 2024-25, announced on July 23, Finance Minister Nirmala Sitharaman proposed to double the Securities Transaction Tax (STT) on F&O of securities, effective October 1, 2024. The STT, which is levied on transactions in specified securities, has been increased to 0.02 per cent and 0.1 per cent, respectively.

The consultation paper showed that in FY 2023-24, 92.50 lakh unique individuals and proprietorship firms traded in the NSE index derivatives segment and cumulatively incurred a trading loss of Rs 51,689 crore. Only 14.22 lakh investors (about 15 per cent) made a net profit, as per NSE data.



HOW A NEW TECH PROMISES TO KILL WEEDS IN RICE AND WHEAT FIELDS, REMOVE NEED FOR STUBBLE-BURNING

Cultivating rice using less water and not burning the leftover straw after harvesting, and wheat without any ploughing and land preparation, has been a holy grail for agricultural scientists and policymakers concerned over the ecological footprint of the two cereal grain crops.

But there's been some breakthrough of late, with the breeding of varieties/hybrids that can "tolerate" the application of a herbicide – Imazethapyr – to control weeds and grasses that affect the growth of crop plants by competing with them for nutrients, water and sunlight.

Such breeding efforts are happening both in the public and private sector.

The current kharif season has seen the commercial planting of two basmati varieties (Pusa Basmati 1979 and Pusa Basmati 1985) and two non-basmati rice hybrids (Sava 134 and Sava 127), developed by the Indian Agricultural Research Institute (IARI) and Savannah Seeds Pvt. Ltd respectively. These contain a mutated acetolactate synthase (ALS) gene that enables farmers to spray Imazethapyr for controlling weeds in rice, such as *Echinochloa colona* (commonly called jangli chawal), *Cyperus rotundus* (motha) and *Trianthema portulacastrum* (patthar-chatta).

In the coming rabi (spring-winter) season, Mahyco Pvt. Ltd is expected to launch its wheat varieties, Goal and Mukut, which are also amenable to Imazethapyr application for controlling *Phalaris minor* (gulli danda), *Chenopodium album* (bathua) and other such major weeds. The Jalna (Maharashtra)-based company and Savannah Seeds – the South Asian subsidiary of the Alvin (Texas)-headquartered RiceTec Inc. – have even formed a joint venture to take their Imazethapyr-tolerant 'FullPage' direct seeded rice (DSR) and 'FreeHit' zero-tillage (ZT) wheat technologies to farmers for making this cropping system "more climate-smart and sustainable".

Weed control now

Farmers flood their paddy fields and do 3-4 ploughings for wheat mainly to control weeds.

Normal rice cultivation involves preparing nurseries, where the paddy seeds are raised into young plants that are uprooted and re-planted around 30 days later in the main field. The field in which the seedlings are transplanted is first "puddled" or tilled in standing water to break up the clods and churn the soil to make it soft.

For the first 2-3 weeks after transplanting, the field has to be irrigated every 1-2 days to maintain a water depth of 4-5 cm. This is necessary to prevent weed growth during the crop's early stage. Water acts like a natural herbicide, preventing the weed seeds from germinating and killing the already emerged seedlings. Farmers continue giving water once a week in the remaining 105-110 days – out of the crop's total 155-160 days duration from seed to grain.

In all, the traditional puddling-cum-transplantation route requires up to 30 irrigations, each consuming over 200,000 litres of water per acre. Puddling alone consumes water equivalent to three irrigations. Besides, there is the labour cost of transplanting, at Rs 4,000-5,000/acre.

In wheat, farmers not only burn the stubble from the previously-harvested paddy crop. They also plough the field – initially twice using a harrow or cultivator, followed by an irrigation and either one more ploughing with a rotavator or two with harrow/cultivator. All this, before sowing the wheat seeds, is primarily for weed management.



Herbicide-tolerant solutions

DSR and ZT wheat basically replace water and repeated field ploughings with a chemical herbicide (Imazethapyr) to take care of weeds.

DSR dispenses with the need for any paddy nursery, puddling, transplanting and flooding of fields. The paddy seeds can be sown directly, just like wheat. Only laser leveling of the land, once before sowing and costing Rs 1,200/acre or so, is recommended to ensure uniform placement of seeds and fertiliser as well as distribution of water. Overall, there is roughly 30% saving of water, apart from labour in transplanting and weed management, and fuel used for puddling.

Mahyco claims that 'FreeHit' ZT technology makes it possible to sow wheat directly – without any paddy stubble burning or even land preparation. Farmers can use a tractor-mounted Super Seeder machine with rotavator that cuts the standing stubble and mixes it in the soil. Alternatively, they can use a Happy Seeder without rotavator that only cuts and leaves the crop residue on the field. Either way, sowing is done with no tillage, saving both cost and time. Imazethapyr is to be sprayed along with Metribuzin, a selective herbicide already used in wheat, when the crop is about 25 days old.

Are these Imazethapyr-tolerant rice and wheat hybrids/varieties genetically modified (GM) crops?

No, they just have an ALS gene that has undergone mutation. This gene is already present in rice and wheat – not introduced from soil bacteria or other unrelated species, as with Monsanto's 'Bollgard' Bt cotton and the still-to-be-approved GM hybrid mustard bred by scientists at Delhi University's Centre for Genetic Manipulation of Crop Plants.

The ALS gene codes for an enzyme (protein) that helps synthesise essential amino acids for plant growth and development. Imazethapyr sprayed on normal paddy and wheat binds itself to the ALS enzymes, inhibiting their production of the amino acids. The herbicide will, then, kill the crop along with the weeds, as it cannot distinguish between the two.

The IARI, Savannah Seeds and Mahyco-bred varieties/hybrids contain a mutated ALS gene, whose DNA sequence – the order of its chemical bases or "letters" that spell out the instructions to a cell's protein-making machinery – has been altered using a chemical mutant or radiation. As a result, the ALS enzymes no longer have binding sites for Imazethapyr and the amino acid synthesis isn't inhibited. The plants can now "tolerate" the herbicide, which only kills the weeds.

But aren't farmers already growing rice through DSR?

DSR cultivation at present is based on two herbicides: one "pre-emergent" (Pendimethalin, applied within 24 hours of sowing) and the other "post-emergent" (Bispyribac-sodium, after 20-25 days). But these aren't effective against all weeds. Imazethapyr is a broad-spectrum herbicide with a wider weed-control range. It is also safer, as the ALS gene isn't present in humans and mammals and the chemical will not bind itself to them.

IARI has distributed 200 quintals of seeds of its two Imazethapyr-tolerant basmati varieties for planting by farmers this season. At 8 kg/acre, these can cover 2,500 acres. Savannah Seeds' rice hybrids have been planted in 15,000 acres across Punjab, Haryana, western Uttar Pradesh, Madhya Pradesh and Chhattisgarh.



The adoption of DSR and ZT – conferring benefits of reduced water and fuel consumption, plus no environmental pollution crop residue burning – is likely to be better with herbicide-tolerant technologies. And not being GM may help too.

PARTNERS IN FOOD SECURITY

“India is hosting the 32nd International Conference of Agricultural Economists (ICAE) from August 2-7 in Delhi. Prime Minister Narendra Modi is the chief guest and Agriculture Minister Shivraj Singh Chouhan is the guest of honour.”

— “It is interesting to note that the last time India hosted this ICAE was in Mysore in 1958, with Jawaharlal Nehru, the then prime minister of India, as the chief guest.”

— “India’s success in ushering in the green revolution and white (milk) revolution is well known. But the African continent is still struggling to overcome food shortages. Nutritional security, especially of children below the age five, still remains a challenge for India and Africa.”

— “Given that the African Union was invited to be a permanent member of G20 during India’s Presidency, it opens the gates for India and Africa to learn from global developments in food and agriculture, and also promote South-South collaboration and learning from each other to overcome their food and nutritional security challenges.”

— “In this context, ICAE has a special session where the experiences of 20 major Indian states were compared with 15 African countries from 2004-05 to 2019-20. The two regions have a lot of experiences to share. The findings of this unique study show that:

1. High debt service ratios result in lower agricultural spending relative to social protection;
2. African countries consistently underfund agriculture compared to Indian states, hampering productivity and efforts to reduce child malnutrition;
3. Enhancing public spending on agricultural R&D and extension is crucial, as both regions underinvest in these high-return areas;
4. The study suggests reforming subsidies and reallocating resources to infrastructure and R&D to boost agricultural growth and improve child nutrition outcomes.”

— “It is now all the more important to get the South-South collaboration on vibrant mode. The developed countries of G20 can help to solve the problems of food and nutritional security in the Global South by addressing climate change with support for resilience and by sharing science and innovation for food systems transformation.”

SHIVRAJ ANNOUNCES RS 18,000 CRORE FOR HORTICULTURE CLUSTERS, SAYS WILL TALK TO AGRI MINISTERS

Union Agriculture Minister Shivraj Singh Chouhan Monday announced `18,000 crore expenditure on setting up 100 export-oriented horticulture clusters in the next five years to boost farm income and said that he will meet all state ministers, irrespective of party, to resolve farmers’ issues as central schemes cannot be implemented without the states.

— Chouhan also said the government will soon launch an oilseeds mission with an outlay of `6,800 crore to boost domestic output and reduce imports of cooking oils.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



— Speaking on the schemes that the government was working on to help farmers and make India a food basket of the world by 2047, he said that farmers will receive a digital identity — similar to Aadhaar — under the Digital Agriculture Mission. It will be linked to land records, crop details through videography, and damage assessment done through remote sensing, which will prevent any manipulation of records.

GOVT APPROVES RS 1,766-CRORE 'CLEAN PLANT PROGRAMME' TO BOOST HORTICULTURE SECTOR

The Cabinet on Friday approved the Clean Plant Programme (CPP), with an outlay of Rs 1,766 crore, under the Mission for Integrated Development of Horticulture (MIDH).

— An official statement read: “With a substantial investment of Rs 1,765.67 crore, this pioneering initiative is set to revolutionise the horticulture sector in India, as well as expected to set new standards for excellence and sustainability...”

— The CPP will provide access to virus-free and high-quality planting materials, leading to improved crop yields and income opportunities for farmers.

— The CPP will have three components — Clean Plant Centres (CPCs), certification and legal framework, and enhanced Infrastructure. “The programme will be implemented by the National Horticulture Board in association with the Indian Council of Agricultural Research.”

For Your Information:

— Highlight from the Union Budget 2024 on Agriculture

— Allocation: Agriculture and allied sectors were allocated 1.52 Lakh Crore in the Union Budget 2023-24.

— Release of new varieties: The new 109 high-yielding and climate-resilient varieties of 32 field and horticulture crops will be provided to the farmers.

— Natural Framing: In the next two years, 1 crore farmers across the country will be initiated into natural farming. The government will establish 10,000 need-based Bioinput research center.

— Digital Public Infrastructure (DPI) for Agriculture: The government in partnership with states will facilitate implementation of DPI in three years. The government will enable Jan Samarth-based Kisan Credit cards in five states.

— The CDP-SURAKSHA is an initiative of the central government to promote horticulture crops. SURAKSHA stands for “System for Unified Resource Allocation, Knowledge, and Secure Horticulture Assistance.” The platform will allow an instant disbursal of subsidies to farmers in their bank account by utilising the e-RUPI voucher (more on this later) from the National Payments Corporation of India (NPCI).

WHY WAS A CUSTOMS DUTY HIKE IMPOSED FOR LAB CHEMICALS?

The story so far:

The Finance Ministry has withdrawn a customs duty hike on imported laboratory chemicals, which was proposed post the Budget, after scientists raised a furore.

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



What are laboratory chemicals?

Imported chemicals, reagents, and enzymes come under the category of laboratory chemicals and are vital to experimental research across nearly every domain of scientific research. They comprise oxidisers, corrosive acids, and compressed gas, that are used by researchers to conduct experiments and even make new products. Outside of research settings, the medical diagnostics industry is run on laboratory chemicals. Closely affiliated to these chemicals are laboratory instruments such as funnels, beakers, test tubes and burners. Because these chemical compounds have a wide range of properties and are potentially hazardous, they are regulated and their imports scrutinised.

Most of such chemicals are niche products and can be fairly expensive. The Customs Department defines laboratory chemicals as “all chemicals, organic or inorganic, whether or not chemically defined, imported in packings not exceeding 500 gms or 500 millilitres and which can be identified with reference to the purity, makings or other features to show them to be meant for use solely as laboratory chemicals.”

What was the issue?

The Budget documents released on July 23, silently hiked the Basic Customs Duty (BCD) on these chemicals to 150% from the existing 10%. The matter came to light with scientists from reputed, publicly funded research laboratories in India reporting on social media platforms, such as X, on having received emails from suppliers — typically there are specialised companies that trade in these chemicals — that the chemicals had become expensive. For instance, a batch of products that usually cost ₹1,00,000 before the Budget would now cost ₹2,50,000. There was also a 25% hike on the plastic components imported for laboratory uses. Researchers were flummoxed by the steep increase and some told The Hindu that they believed it to be a “misprint.” Several senior scientists wrote to the Ministry of Science and Technology asking for clarity. However an issue of customs duty must ultimately be dealt with by the Ministry of Finance along with the Commerce Ministry.

Why are imported chemicals a must?

India is a major pharmaceutical and chemicals manufacturer and also an exporter of complex chemicals. However, there isn't enough of local demand among Indian research institutions for companies to make the substantial capital investments required to produce niche chemicals, Dr. Vinod Scaria, a biologist, told The Hindu. A key feature of experimental research is trying to replicate results of experiments conducted abroad and this often requires the exact materials used.

How was the issue resolved?

As it emerged, the hiked up rate wasn't a misprint. The customs department did this as it wanted to reign in imports of ethanol that were being brought in as 'laboratory chemicals' to avoid the customs duty of 150%. There are broadly two kinds of ethanol. Ethanol, of varying grades, sourced from grain and used in the manufacture of alcohol and, 'denatured' ethanol, which is ethanol mixed with additives and unfit for consumption. The latter also comes in grades but is used in laboratories and in commercial applications.

Scientists told The Hindu that denatured alcohol is made by several local manufacturers and doesn't usually need to be imported. However, the revised Finance Ministry notification puts in



some additional caveats that may still impose some delays in the procurement of such chemicals. It states that while the duty rate would revert back to the original rate, all imported laboratory chemicals need to be accompanied by a letter that says the goods will only be used in a laboratory and for research and not further traded for commercial gains.

ON DOORSTEP DELIVERY OF ALCOHOL

The story so far:

The States of Delhi, Karnataka, Haryana, Punjab, Tamil Nadu, Goa, and Kerala are or were mulling plans to allow the doorstep delivery of alcohol through platforms like Swiggy, BigBasket, and Zomato. India has seen a steady rise in alcohol consumption. The recorded per capita consumption has increased from 1.6 litres in 2003-2005 to 2.2 litres in 2010, then to 5.5 litres in 2016-2018. With \$52 billion in revenue, India is the sixth-largest alcohol market worldwide. According to a Ministry of Social Justice and Empowerment survey in 2019, there were about 16 crore alcohol users in India in the 10-75 year age group in 2018. Medically, the safe limit for alcohol consumption is zero millilitres. Alcohol use causes three lakh deaths in the country every year.

Why doorstep delivery?

There are two main arguments in favour of doorstep delivery of alcohol. First, that excise taxes on alcohol sales can help generate revenue for Central and State governments. Across States, taxes on alcohol sales contribute up to a quarter of all revenue generated for governments. Second, doorstep delivery can help reduce drunk-driving incidents and prevent road traffic crashes and injuries. In India, 6-48% of fatal road traffic fatalities are due to alcohol use.

A third argument is that doorstep deliveries may not threaten the safety of women consumers. There is some evidence from Kerala that shutting bars selling hard liquor reduced on-premise violence against women. Doorstep delivery options might have a similar effect, especially for women who live alone or with other women.

However, this argument is on a slippery slope: for the majority of India's women, safety cannot be presumed as domestic violence related to alcohol use is rampant. So while doorstep delivery will help women access alcohol without social stigma — a possible advantage in itself — whether it could reduce violence against them is suspect.

What are the arguments against?

Studies to date agree that for India, the costs due to alcohol use exceed economic benefits from alcohol sales. Second, schemes with doorstep delivery of alcohol assume people will change their drinking and socialising behaviours in response to the new option. It is reasonable but requires concrete evidence. There is some evidence that the availability of alcohol on-demand can increase consumption, promote binge drinking, and lead to harms related to alcohol use.

Similarly, it is not straightforward to assume doorstep alcohol delivery can reduce drunk-driving. There are several other, evidence-based policies that can help deal with that issue including sobriety checkpoints, stringent penalties for repeat offenders, and increasing availability of public transport and other ride-share options.



What are the effects of alcohol consumption?

Alcohol is a carcinogen and causes at least seven types of cancers. Alcohol consumption also increases the risk of injuries, abuse of other substances, mental illnesses, diabetes mellitus, liver disease, diseases of the heart and blood vessels, and chronic kidney diseases. Along with health implications for the user, male alcohol misuse increases the risk and severity of inter-partner violence.

Treatment of diseases and injuries due to alcohol consumption are expected to cost India more than ₹3 lakh crore between 2011 and 2050. Adding productivity losses raises this to ₹121.3 lakh crore. The revenue to governments from excise taxes will be only one-fifth of the financial losses. Worldwide, the alcohol industry is known for intense lobbying including efforts to weaken health warning labels. The alcohol industry views low- and middle-income countries as emerging markets. In India, the industry has been known to advocate against alcohol use reduction policies despite evidence of its effectiveness.

What can governments do?

Except for some national policies — including drunk driving laws and health warning labels — alcohol-use policies have been delegated to States, resulting in wide variation in policy framing and implementation. The instruments available to State and Central governments allow them to mitigate harms due to alcohol use through cross-sectoral public health approaches. They include restricting the availability and marketing of alcohol, higher taxes, enforcement of drunk-driving laws, and higher investment in cost-beneficial psychosocial treatments of alcohol-use disorders. So if doorstep delivery is to be offered, for example, States can change the trade-off for consumers from whether they should order in to whether they should drink at all — which they can achieve by setting higher prices and taxes.

In tandem, governments should work with health departments and other organisations to monitor the impact of doorstep delivery on alcohol consumption. Companies offering these services must share accurate data with the government to understand the health and economic burden. The decision should be revised if harms are evident.

CABINET CLEARS 3 CRORE ADDITIONAL HOUSES UNDER PM HOUSING SCHEME

In a major push for rural and urban housing, the Centre on Friday gave its nod for three crore additional houses under the Pradhan Mantri Awaas Yojana (PMAY).

— Of the 3 crore houses, two crore will be constructed under the Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) and one crore under the PMAY-Urban.

— The Centre had launched the PMAY-G from April 2016 with an aim to construct 2.95 crore houses by March 2024.

— The PMAY-Urban 2.0 scheme aims to construct 1 crore new homes through four verticals — beneficiary-led construction, in which financial assistance would be provided to EWS families to build homes on their own land; affordable housing in partnership, which will give aid to EWS families buy houses constructed by states or private agencies; affordable rental housing, in which rental housing units for industrial workers and working women hostels will be made; and interest subsidy scheme, in which EWS, LIG and MIG families taking loans of up to Rs 25 lakh will get 4% interest subsidy.

**For Your Information:**

— The government had launched the Pradhan Mantri Awas Yojana (Urban) on June 25, 2015, to provide pucca houses to all eligible beneficiaries by 2022. The PMAY-U is one of the two schemes envisioned under the PMAY-U. It is focused on the urban areas, while the other one—PMAY-G—is for rural areas.

— The scheme has four verticals: “In-situ” Slum Redevelopment (ISSR); Credit Linked Subsidy Scheme (CLSS); Affordable Housing in Partnership (AHP) and Beneficiary-led individual house construction/enhancements (BLC).

IN GOVT’S 100-DAY PLAN: LAUNCHING RS 5,000-CR PROJECTS IN AMRUT 2.0

Under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0, cities are likely to initiate projects worth Rs 5,000 crore, covering water supply, sewage treatment, and rejuvenation of water bodies and parks, as a part of the 100-day agenda of the National Democratic Alliance (NDA) government, during its third term.

— Launched in 2021, AMRUT 2.0 aims to provide tap water supply to all households across 4,800 statutory towns in the country.

— With the aim of universal tap water supply, the first iteration of AMRUT covered 500 cities in the country. Expanding the coverage to all statutory towns, AMRUT 2.0 was approved with a Central assistance of Rs 66,750 crore from 2021-2022 until 2025-2026, with the total estimated outlay at Rs 2.99 lakh crore.

— With two years to go, work on 50 per cent of the projects is yet to start on the ground.

— Projects covering rejuvenation of water bodies, development of parks, groundwater recharge and urban flood mitigation are also being implemented under AMRUT 2.0.

— Under the 100-day agenda, cities also aim to commission sewage treatment plants (STPs) with a total capacity of 500 million litres a day (MLD) that would benefit around 6 lakh households, and 150 MLD of water treatment plants for 2 lakh households, sources said.

For Your Information:

The purpose of AMRUT is to:

- I. Ensure that every household has access to a tap with an assured supply of water and a sewerage connection;
- II. Increase the amenity value of cities by developing greenery and well-maintained open spaces (parks); and
- III. Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).

IN RUN-UP TO MERGER, AIR INDIA AND VISTARA GET DGCA NOD TO INTEGRATE AIRCRAFT LINE MAINTENANCE OPERATIONS

Tata group airlines Air India and Vistara have received the Directorate General of Civil Aviation's (DGCA's) approval to integrate their aircraft line maintenance operations. The development marks a significant move towards operational synergy between the two carriers that are on the path to be merged into a single airline, according to sources in the know.

The integration of aircraft line maintenance operations will help the Air India-Vistara combine to enhance operational performance, reduce aircraft turnaround times, and bolster on-time performance, said the official, who did not wish to be identified.



DreamIAS



LIFE & SCIENCE

SUNITA WILLIAMS, BUTCH WILMORE AND THE ZERO GRAVITY LIFE

First, a clarification: Unlike in Gravity, the 2013 film about two astronauts left adrift after space debris damages their shuttle, Sunita Williams and Butch Wilmore are not stuck in space. NASA assures that the two astronauts who blasted off aboard the Boeing Starliner on June 5 for what was supposed to be an eight-day mission will simply return to Earth a little later than expected. This will likely be in February 2025 with a SpaceX Crew Dragon craft that is scheduled for a mission at the time.

In interviews from the International Space Station (ISS), both Williams and Wilmore have indicated that they are busy enough with tests and maintenance work that the next few months are likely to pass quickly. If there is an excruciatingly long wait, it is for those on Earth who are fantasising about regular commercial space flights for tourists taking off within the next decade or so. Long before Yuri Gagarin shot off into space aboard the Vostok 1 in 1961, dreams of exploring the vast blue beyond have haunted the human imagination. Yet, the persistent hitches that have delayed the return of Williams and Wilmore — glitchy thrusters and helium leaks — indicate that while space travel technology has made great strides since then, the average traveller's dreams of spacewalking at teatime and catching sight of a sunrise every 90 minutes aboard the ISS are still a long way from coming true.

Meanwhile, Williams and Wilmore will adjust to zero-gravity life, carrying out experiments — like how to care for plants in space — and participating in chores like cleaning toilets. Their journey to space and back, with all its problems and mundaneness, will become not a sensation-creating headline, but yet another chapter in the ultimate human endeavour. A small step, maybe, but also a big leap, as another famous astronaut once said.

OLYMPIC CAULDRON

— A few months before the opening of the Olympic Games, a flame is lit at Olympia, in Greece. From there, the Flame is carried for a number of weeks to the host city, mainly on foot by runners, but also using other forms of transport.

— The Olympic torch relay ends with the lighting of the Olympic cauldron during the opening ceremony of the Olympic Games.

— Marie-José Pérec and Teddy Riner lit the Cauldron of the Olympic Games Paris 2024.

By lighting the Cauldron, Marie-José Pérec and Teddy Riner launched the Olympic Games Paris 2024 and concluded the Torch Relay.

— This is the first cauldron in Olympic history to light up without the use of fossil fuels. Instead, it depends on water and electric light. It is created by French designer Mathieu Lehanneur.

— The cauldron is seven metres in diameter, and the ring at the base of the balloon has 40 LED lights installed in it.



FROM PIGEON SHOOTING TO TUG-OF-WAR, 5 SPORTS THAT ARE NO LONGER PART OF THE OLYMPICS

There are 32 different sports at the ongoing 2024 Paris Olympics, including tennis, volleyball, soccer, and various genres of wrestling, aquatics, gymnastics, and cycling. Over the years, however, many sports and events have disappeared from the Olympic schedule. Here is a look at five such events.

1. Live pigeon shooting (1900)

Live pigeon shooting was held for the first (and last) time at the 1900 Olympic Games in Paris. Live pigeons were set free in the air and competitors had to kill the maximum number of birds possible. During the event, nearly 300 pigeons were killed and Leon de Lunden of Belgium won the gold medal.

In the following years, Olympic officials decided to not use the living targets. Instead, they introduced clay pigeons which were thrown into the air at different speeds and heights as targets.

2. Hot air ballooning (1900)

The event of hot air ballooning, introduced as a demonstration sport, had multiple contests over several months at the 1900 Olympic Games. Drivers competed in different categories, including the distance travelled, altitude reached, and the best photograph taken from a balloon.

French balloonist Henry de La Vaulx won the distance race by flying his balloon 768 miles from Paris to Poland, which was then part of Russia. When he landed, Russian police took him into custody for not putting in a passport request.

3. Tug-of-war (1900 to 1920)

Tug-of-war took place at five Olympic Games between 1900 and 1920. According to the rules, an eight-man team had to pull their opponents six feet to win. If either side failed to achieve this goal, judges would give the struggle a further five minutes and then declare the team, who had made the most progress, the winner.

At the 1908 Olympic Games in London, a controversy erupted after the British team was accused of wearing heavier than usual boots, making it hard for them to be tugged over.

4. Plunge for the distance (1904-1908)

The event required the athlete to dive into the pool from a standing position and coast underwater without moving their body for as long as possible.

“After 60 seconds had passed – or competitors had floated to the surface, whichever came first – referees measured the distance the athletes had drifted,” according to a report by Time magazine.

5. Running deer shooting (1908-1924)

No live deer was involved in the event, but competitors had to shoot a piece of wood in the shape of a deer mounted on a cart on rails. The target used to be 100 metres away and competitors had 4 seconds to shoot the deer as it moved through the track.



At the 1920 Olympic Games, Sweden's Oscar Swahn, 72, won the silver medal in the event, becoming the oldest Olympic medallist.

DISORDER OF SEX DEVELOPMENT (DSD)

- Italy's Angela Carini withdrew from her Round of 16 boxing bout against Algeria's Imane Khelif after just 46 seconds and a few punches to her face at the Paris Olympics.
- Disorders of Sexual Development (DSD) encompass a group of congenital conditions associated with atypical development of internal and external genital structures.
- Swyer syndrome is a condition in which individuals have a typical female appearance and external genitalia but possess XY chromosomes and non-functional gonads or reproductive glands, often leading to delayed puberty and infertility.
- Complete Androgen Insensitivity Syndrome is a condition where individuals have XY chromosomes but their bodies cannot respond to androgens (male hormones), resulting in a female appearance.
- Mixed Gonadal Dysgenesis is a condition where individuals have both ovarian and testicular tissue, leading to ambiguous genitalia and atypical development of secondary sexual characteristics.

HOW NOAH LYLES WON THE GREATEST EVER OLYMPIC 100M RACE IN PARIS

The Olympics had never seen such a rush at the finish line of a 100 m final as it did on late Sunday night (August 4), at the iconic Stade de France in Saint-Denis.

In the end, US track and field star Noah Lyles leaned forward at the perfect time to be just 0.005 seconds faster than Jamaica's Kishane Thompson to win a gold in a photo finish. All eight sprinters, bunched together for most of the race, finished with sub-10 second timings.

People have run faster races in the past, but no race has been as close as this one.

A close bunch

For collective brilliance, Sunday's race was absolutely the greatest 100 m final of all time, as for the very first time in history, all eight men clocked sub-10 second timings under legal wind conditions. According to World Athletics, "a 100 m sprint time will only be considered 'wind legal' if the wind speed is 2m/s or less".

Jamaica's Oblique Seville finished last, but his 9.91 seconds timing would have been good enough for a third place finish at the Tokyo Olympics, three years ago. Defending champion Marcela Jacobs of Italy finished fifth with a timing of 9.85 seconds, good enough for a second place in the Beijing Olympics when Usain Bolt set the then Olympic record 9.69 second timing.

All in all, sprinters from the fourth to eighth place recorded best-ever times in a 100 m race.

Photo finish for gold

In real time, the race was too close to call. Both Lyles and Thompson were credited with a time of 9.78 seconds, which flashed on TV screens across the world. On air, commentators felt that



Thompson had won the race by a whisker, but broadcast cameras are simply incapable of giving an accurate picture for such close finishes.

This is where the fully automated timing and photo finish system, which records the timings of all athletes, comes in. This comprises three things:

* The starter's pistol, resembling a modern-day gas lighter, triggers a flash of green light and a sound mimicking the crack of a gun from small speakers behind athletes' starter blocks. It also kickstarts the timing device.

* Sensors are embedded on the starting block to catch false starts. They measure the pressure of an athlete's foot on the block, 4,000 times a second. World Athletics rules deem a reaction time of less than a tenth of a second as a false start because the human mind cannot react to the starter's pistol faster than this.

* At least two cameras on either side of the finish line provide a composite image of the sprinters. World Athletics requires these cameras to be able to take a minimum of 1,000 images per second. Omega, the official time-keeper of the Olympics, has been using cameras that take 40,000 images per second at the finish line in Paris, up from the 10,000 images per second taken during the Tokyo Games.

The photo finish cameras at the finish line found Lyles to have just edged out Thompson, despite overhead cameras showing that Thompson's foot crossed the line ahead of Lyles. This is because the athlete's torso has to cross the finish line to be counted, not his head, arms, neck, or feet.

Lyles won by five-thousandths of a second because he got his torso to break the line first. Rewatch the race in slow motion to see Lyles dip just slightly quicker using his right shoulder, with his experience of being a 100 m, 200 m and 4×100 m relay world champion coming good in the big final.

HOW TIME HAS BEEN KEPT THROUGHOUT HISTORY: FROM SUNDIALS TO ATOMIC CLOCKS

Time is an inalienable part of our reality. Scientists don't understand it fully at the universe's largest and smallest scales, but fortunately for humans, a panoply of natural philosophers and inventors have allowed us to keep step with its inexorable march — with clocks.

What is a clock?

Clocks are devices that measure the passage of time and display it. Their modern versions have the following parts — a power source, resonator, and counter.

A clock measures the amount of time that has passed by tracking something that happens in repeating fashion, at a fixed frequency. In many modern clocks, for example, this is a quartz crystal. More rudimentary devices often depended on natural events instead. The sundials in use in ancient times allowed people to 'tell' time by casting shadows of changing lengths against sunlight. In water clocks, water would slowly fill a vessel, with its levels at different times indicating how much time had passed. The hourglass served a similar purpose, using sand instead of water.



How did mechanical clocks work?

Until the Middle Ages, engineers around the world improved the water clock with additional water tanks, gear wheels, pulleys, and even attached musical instruments to the point where they were practically developing rudimentary analog computers.

One of the first major revolutions in timekeeping that paved the way for modern clocks was the invention of the verge escapement mechanism in the 13th century, which first opened the door to mechanical clocks. The fundamental element here was a gear that, through a combination of mechanical arrangements, could only move in fixed intervals. The gear was called an escape wheel if it was circular. A second gear, called the balance wheel, was enmeshed with the first such that when the escape wheel moved forward one gear tooth at a time, the balance wheel would oscillate back and forth. This oscillation would drive the 'hands' of a clock on a clockface as long as some force was applied on the balance wheel to keep it moving.

Between the 15th and 18th centuries, clockmakers developed and improved on spring-driven clocks. These devices replaced the suspended weight that applied the force on the balance wheel in the previous designs with a coiled spring. To keep these clocks from becoming inaccurate as the spring unwound, clockmakers also developed mechanisms like the fusee, which ensured the spring always delivered a uniform force. The idea to couple a balance spring with the balance wheel also led to the advent of pocket watches.

After every 'tick' motion before the 'tock' motion towards the other side, the balance spring would return the balance wheel to its neutral position. As a result, the clocks lost a few minutes a day versus a few hours a day before.

Finally, in the mid-17th century, the Dutch inventor Christiaan Huygens invented the pendulum clock. While the clock itself used the by-then familiar escapement mechanism, Huygens made an important contribution by working out a formula to convert the pendulum's swings to the amount of time passed.

How did clocks change shipping?

The marine chronometer came the next century. For a ship to accurately know where it was on the face of the earth, it needed to know its latitude, longitude, and altitude. The latitude could be computed based on the Sun's position in the sky and the altitude could be assumed to be sea level, leaving the longitude — which requires an accurate clock onboard each vessel. Pendulum clocks couldn't serve this purpose because the ship's rocking motion rendered them inaccurate.

A carpenter named John Harrison built a working marine chronometer in 1761 and delivered it to the British government for its longitude prize, worth GBP 20,000 at the time. This device featured mechanisms to ensure the clock's operation wasn't affected by the ship's rocking, the force of gravity, and some temperature changes.

Thus, time flew until modernity dawned. The better clocks of the 19th century were electric clocks, that is, whose energy source was a battery or an electric motor rather than suspended weights or springs, although the former and latter were attached to improve the efficiency of existing designs. And at long last came the 20th century.

How do quartz clocks work?



Two important types of clocks in operation today are the quartz clock and the atomic clock. The fundamental setup of both these instruments is similar: they have a power source, a resonator, and a counter. In quartz clocks, the resonator is a quartz crystal. The power source sends electrical signals to a quartz crystal, whose crystal structure oscillates due to the piezoelectric effect. The signal's energy can be tuned to make the crystal oscillate at its resonant frequency, making it the resonator. The counter counts the number of periodic oscillations and converts them into seconds (depending on the crystal's period). A digital display shows the counter's results.

Such quartz clocks are inexpensive to make and easy to operate, and their invention led to watches and wall-clocks becoming very common from the mid-20th century.

What are atomic clocks?

An atomic clock may seem futuristic in comparison.

The power source is a laser and the resonator is a group of atoms of the same isotope. The laser imparts just enough energy for the atom to jump from its low energy state to a specific higher energy state. And when the atom jumps back down, it releases radiation with a well-established frequency. For example, the caesium atomic clock uses caesium-133 atoms as the resonator. When these atoms excite and then de-excite, they release radiation of frequency 9,192,631,770 Hz. So when the counter detects 9,192,631,770 full waves of the radiation, it will record that one second has passed.

Atomic clocks are distinguished by their resonator; each such clock is called a time standard. For example, India's time standard is a caesium atomic clock at the National Physical Laboratory, New Delhi, which maintains the Indian Standard Time. Many countries are currently developing next-generation optical clocks. This is because the higher the frequency of the radiation emitted in the clock, the more stable the clock will be. That emitted in a caesium atomic clock is in the microwave range (gigahertz), and the resulting clock loses or gains a second only once in 20 million years or so. The radiation in the next-generation clocks is in the optical range (hundreds of terahertz) — thus the clocks' name. These devices use strontium or ytterbium atoms as resonators and don't miss a second in more than 10 billion years.

Some physicists have even started work on the next-to-next generation of devices, called nuclear clocks: their resonators are the nuclei of specific atoms rather than the whole atom. Atomic clocks need to make sure the resonator atoms aren't affected by energy from other sources, like a stray electromagnetic field; an atom's nucleus, however, is located well within each atom, surrounded by electrons, and thus could be a more stable resonator.

Since April this year, researchers around the world have reported three major developments in building functional nuclear clocks: a laser to excite thorium-229 nuclei to a specific higher energy state, a way to link a thorium-229 nuclear clock with an optical clock, and a precise estimate of the excitation energy. The nucleus's de-excitation emission has a frequency of 2,020 terahertz, alluding to an ultra-high precision.

ON THE PHYSICS OF PRESSURE: HOW THE MICROSCOPIC WORLD INTERACTS WITH US

Pressure is an interesting thing: we often don't like it and try to avoid it, but it is indispensable. It's everywhere and there is a bit of wonderful physics hiding in it.



Pressure is how the microscopic world interacts with us. We don't see billions of atoms and molecules around us in the air but they hit us continuously all the time, creating what we call air pressure. When you are taking a flight, if there is a risk of the number of air molecules reducing around you, the flight host tells you "the pressure may fall, please use an oxygen mask". If you want to cook something where you want these air molecules to be more energetic — to strike your vegetables better — you use a pressure cooker. In fact, before putting your vegetables in the cooker, you add water. These water molecules become hot and impact your carrots and potatoes, breaking their molecular bonds and cooking your food. You keep all these molecules locked in a strong metal vessel they can't escape, increasing the pressure.

But what really is pressure?

Of forces and apples

Pressure and force are deeply related. You may have heard of Isaac Newton as just another of those long-haired physicists, but the basic unit of force is named in his honour: newton (N). A unit is a thing you use to measure quantities or other aggregates of some entity. For example, we measure distances in metres, weights in kilograms, and the amount of milk in litres. Likewise, force — such as when you push or pull a door — can be 'counted' in newtons. A fruit, like a small apple, weighs roughly 100 g and will exert a force of about 1 N on your hand. In fact, after a bout of intermittent fasting, if you weigh unreasonably low — like 50 kg — you can instead say you weigh 500 N.

Pressure is the average force spread over any area. Imagine a heavy book is resting on your palm. Now imagine you're holding the same book up with just one finger. The weight of the book remains the same but it feels heavier because it rests on a tinier region.

A pascal (Pa) is a unit of pressure. One pascal is really a very small amount of pressure. For instance, the same apple on your hand exerts a pressure of about 500 Pa. All the air on top of our heads, right up to space, exerts a pressure of 100,000 Pa — like about 200 apples on your hand!

Like air, all fluids have pressure, too, including our blood. The molecules of blood hit the walls of our arteries at different speeds, creating pressure. When you get your blood pressure measured, the doctor will give you a number like 120/80. These numbers also denote pressure, but not in pascals.

Blood pressure

Just like the atmospheric pressure of air is equivalent to around 200 small apples, it is also equivalent to some amount of liquid. For example, if you are about 10 m underwater, the pressure the water creates on you (aside from the psychological pressure of being unable to breathe) is equivalent to that of the atmosphere.

When you measure blood pressure, if you notice carefully, the doctor will place a cuff around your upper arm and start pumping air. The idea is to bring the pressure of the air around your arm close to that of the pressure of the blood flowing in your arteries, then release it slowly. In older pressure machines, this pressure in the cuff was balanced using a column of liquid in a tube.

The pressure in our blood is about one-fifth that of atmospheric pressure, so if you want to measure with water, you will need two metres of water. That's very inconvenient to carry around. People therefore looked for a liquid that was heavier than water, thus requiring a smaller quantity of it, which would allow doctors to carry the blood-pressure machines around easily. Mercury is



about 15-times heavier than water, so small amounts suffice to balance the cuff pressure. And the 120/80 doctors say is actually 120 mm or 80 mm of mercury: the former is the pressure when your heart beats and the latter, when your heart rests between beats.

How does the pressure machine — or a sphygmomanometer — know when the pressure of the cuff around your arm matches that of the blood in your arteries? This bit of beautiful physics is for another day. If you are interested in learning more, consider taking a physics course.

Pressure cooker

Once you start seeing the effects of pressure somewhere, you will start realising it is actually everywhere. The water in your tap, the clouds that suddenly appear on a sunny day, or the fact you can drive your bike or car on those wheels.

The next time you hear a pressure cooker's whistle in the kitchen closest to you, don't just thank yourself or the person cooking your food. Thank the pressure cooker as well.

US ANTITRUST RULING AGAINST GOOGLE AND ITS IMPLICATIONS FOR INDIA

“Google is a monopolist, and it has acted as one to maintain its monopoly,” Judge Amit Mehta of the US District Court of Columbia said in a landmark verdict on Monday. He held that tech-giant Google violated antitrust laws to maintain a monopoly over “general search services” and “general search text ads.”

— The Justice Department and several states had sued Google for illegally cementing its dominance, in part, by annually paying the likes of Apple and Samsung billions of dollars to have Google automatically handle search queries on smartphones and web browsers.

— In India too, Google has faced allegations of anti-competitive practices. On Monday, the Alliance of Digital India Foundation (ADIF) filed a complaint claiming that Google has indulged in anti-competitive practices in the online advertising market.

— Moreover, in October 2022, the Competition Commission of India (CCI) — which decides disputes relating to practices that may harm competition in Indian markets — imposed a monetary penalty of Rs 1337.76 Crores on Google.

— It held that mandatory pre-installation of the Google Mobile Suite (Google Search, YouTube, Gmail, etc.) on Android devices with no option to uninstall the apps is an abuse of Google's dominant position in the market.

— Judge Mehta ruled that a consequence of Google's position as the default General Search Engine (GSE) is that it now operates at a scale that disincentivises competitors from emerging in the same space.

— The Ministry of Corporate Affairs released the Draft Competition Bill, 2024, in March which is geared towards preventing tech companies of this scale — termed Systemically Significant Digital Enterprises (SSDEs) — from participating in anti-competitive practices.

— The Bill imposes restrictions on SSDEs, including barring them from favoring their own products and services, and barring them from using or sharing users' personal data without their consent.



— Big tech companies have objected to the Bill, saying that it imposes significant compliance burdens on them which would shift focus from innovation and research to pre-emptively ensuring that companies do not engage in anti-competitive practices.

For Your Information:

— The draft law, called the Digital Competition Bill, 2024, also has provisions to set presumptive norms to curb anti-competitive practices before they actually take place, and promises to impose heavy penalties — which could amount to billions of dollars — for violations.

— The proposal is similar to the EU's Digital Markets Act (DMA), which went into complete effect earlier this year, and requires large tech firms like Alphabet, Amazon and Apple to open their services, and not favour their own at the expense of rivals.

KAKADU NATIONAL PARK

— Australia has banned mining in the Jabiluka site which is located in the famous Kakadu National Park.

— The Jabiluka site became the focus of intense legal wrangling between the Mirarr people and mining companies after the uranium deposit was discovered there in the early 1970s.

— Kakadu National Park is inscribed on the UNESCO World Heritage List.

WHAT'S CAUSING ANTARCTICA'S DEEP-WINTER HEATWAVE, WHAT COULD BE ITS FALLOUT?

For the second time in two years, a record-breaking heatwave is sweeping through Antarctica at the height of its winter season. Ground temperatures have been 10 degrees Celsius higher than normal on average since mid-July, and up to 28 degrees higher on certain days.

In parts of East Antarctica, the relatively higher-elevation swathe that makes up two-thirds of the world's coldest continent, temperatures are currently in the range of minus 25 degrees to minus 30 degrees Celsius. Deep-winter temperatures here usually vary between minus 50 degrees and minus 60 degrees Celsius.

While even these elevated temperatures would be difficult to imagine for most people, they are alarmingly high for the permanently frozen continent at the bottom of the world. What is happening in Antarctica?

Reasons for heatwave

Scientists believe that the higher temperatures are mainly a consequence of the weakening of the polar vortex, the band of cold air and low pressure systems that spins around the poles of the Earth in the stratosphere.

The vortex usually remains strong and stable during winter in the southern hemisphere — keeping cold air trapped over Antarctica and not letting hot air come in — but it has been disturbed this year by large-scale atmospheric waves (periodic disturbances in the fields of atmospheric variables).



Due to this, the vortex released trapped cold air, and opened the door for warmer air to enter the region. As this warmer air travelled downwards from the upper atmosphere, it caused an increase in temperatures.

A weakened southern hemisphere vortex is a rare event that is only expected to occur once every two decades on average, Thomas Bracegirdle, the deputy science leader of the British Antarctic Survey's Atmosphere, Ice and Climate team, told CNN in an interview. "This is a very unusual event, from that perspective," Bracegirdle said.

Several other factors — including the reduction of the extent of the Antarctic sea ice — could also be at play.

In June, the extent of Antarctic sea ice was the second-lowest ever for that time of year — a little more than the extent recorded in June 2023, the lowest ever. Sea ice plays a crucial role in keeping temperatures down in the polar regions, as its bright, white surface reflects more sunlight (solar energy) back to space than liquid water.

Sea ice also ensures that the air remains cool by acting as a barrier between the cold air and the relatively warmer water below.

Edward Blanchard, an atmospheric scientist at the University of Washington, told The Washington Post: "It is likely that having less sea ice and a warmer Southern Ocean around the Antarctic continent loads the dice for warmer winter weather over Antarctica... From this perspective, it might be a bit less surprising to see large heat waves in Antarctica this year".

Global warming has hit Antarctica harder than elsewhere on the planet. According to a 2023 study published in the journal Nature Climate Change, the continent is likely warming at a rate of 0.22 degrees Celsius to 0.32 degrees Celsius per decade — almost twice as fast as the rest of the world. The Intergovernmental Panel on Climate Change (IPCC), the United Nations body that advances scientific knowledge about climate change, has estimated that the Earth as a whole is warming at the rate of 0.14-0.18 degrees Celsius per decade.

The possible fallouts

Antarctica's hot winter will likely lead to further losses of the Antarctic Ice Sheet (the world's other major ice sheet is the Greenland Ice Sheet) that can potentially raise global sea levels by hundreds of feet. Antarctica has already lost 280% more ice mass in the 2000s and 2010s than it lost in the 1980s and 1990s, according to a 2019 study published in the journal PNAS.

In March 2022, when the continent witnessed its largest heatwave, and temperatures in East Antarctica soared to 39 degrees Celsius above normal, a portion of the ice sheet the size of Rome collapsed.

The Antarctic Ice Sheet, a glacier covering 98% of the Antarctic continent, holds more than 60% of the world's total freshwater. If entirely melted, it can submerge coastal cities and reshape the world's map. A sea level rise of only a few feet will displace the roughly 230 million people who live within about 3 feet of the high tide line today, according to a report by the environmental organisation Antarctic and Southern Ocean Coalition.

Rising temperatures will also impact the global ocean circulation system, which regulates climate by storing and transporting heat, carbon, nutrients, and freshwater around the world. A 2023 study published in the journal Nature showed that the melting ice in Antarctica is slowing down



this circulation. The freshwater from melting ice reduces the salinity and density of the surface water and diminishes the downward flow to the ocean's bottom, the analysis said.

A slower global ocean circulation system will lead to oceans absorbing less heat and CO₂, intensify global warming, and increase the frequency and intensity of extreme weather events like floods and droughts.

HOW PYROCUMULONIMBUS CLOUDS ARE FORMED WHEN WILDFIRES SPIT STORMS, LIGHTNING

The wildfires currently raging in the United States and Canada are so intense that they have created 'pyrocumulonimbus' clouds, which have the potential to spit out thunder and spark more fires.

The development of these clouds has become more frequent in recent years. Before 2023, 102 pyrocumulonimbus were recorded globally in a single year on average — 50 of them were seen in Canada, according to a report published in the journal Nature. However, during last year's extreme wildfire season, 140 pyrocumulonimbus clouds were recorded in Canada alone, the report said.

How are Pyrocumulonimbus clouds formed?

Not every wildfire leads to the creation of pyrocumulonimbus clouds. They occur only when there is an extremely hot wildfire — volcanic eruptions can also lead to the formation of pyrocumulonimbus clouds. For instance, these clouds were formed during the Australian bushfires of 2019-2020 when temperatures crossed 800 degrees Celsius.

The intense heat from the fire warms the surrounding air which moves upward into the atmosphere. As this hot and very buoyant air — carrying water vapour, smoke, and ash — rises, it expands and cools down. Once it is cool enough, water vapour condenses on ash, forming a grey or brown cloud. At this stage, the cloud is known as a pyrocumulus cloud, also known as 'fire cloud'. But if there is sufficient water vapour available and the upward movement of hot air intensifies, pyrocumulus clouds can evolve into a pyrocumulonimbus cloud. These clouds can reach heights of 50,000 feet and generate their own systems of thunderstorms.

Although pyrocumulonimbus clouds can produce lightning, they do not generate much rain. As a result, they can spark new wildfires many kilometres away from the main blaze. These clouds can also trigger strong winds that can make the spread of the wildfire faster and unpredictable.

Why are pyrocumulonimbus cloud events occurring more often?

The exact reason remains unclear as unlike in the case of other extreme weather events, the study of these clouds is relatively new. However, scientists believe that climate change could have a role to play in the increase of their frequency.

Studies have shown that with temperatures soaring across the world, wildfires are becoming more common and intense. This could be spiking the occurrence of pyrocumulonimbus clouds.

"In a general sense, if you have more fires you'll have more pyroCbs (pyrocumulonimbus) because there are more opportunities to have them sink up, but it depends on atmospheric conditions, too... An intense wildfire definitely increases the odds," David Peterson, a meteorologist at the US Naval Research Laboratory in California, told The New York Times.



CERAMIC: A MATERIAL FOR THE AGES

WHAT IS IT?

Take some nonmetallic, inorganic material and fire it to a high temperature, and you'll have a ceramic. The word comes from the Greek *keramos*, or "potter's clay," speaking to a common application of ceramics in ancient times.

This said, there is evidence of humans having made and used ceramic objects for more than 25,000 years. Archaeologists have discovered ceramic pottery and figurines in the ruins of various ancient civilisations, including those in the Indus Valley and in Keezhadi in Tamil Nadu. The colours found on these materials, their shapes and designs, and their purposes have hinted at their origins and the processes the members of each civilisation used to make them.

Ceramics can typically withstand very hot or acidic environments, many forms of chemical erosion, and are hard and difficult to compress. But they are also brittle — i.e. can shatter — and don't handle shear, or sliding, stress well. The science of preparing and studying ceramics' microscopic properties is called *ceramography*.

In modernity, scientists have used ceramics on space shuttles (as part of the heat shield during atmospheric reentry) to produce heat in microwave furnaces, as abrasives, in the production of varistors and semiconductors, as nuclear fuel, in fighter aircrafts' windows, and in tomographic scanners, among other settings. The discovery of high-temperature superconductivity in some ceramic materials won two scientists the 1987 physics Nobel Prize.

DREAMS: A FLEETING REALITY

Q: What is dreaming when we sleep?

A: A dream is an involuntary series of visual or auditory imagery, emotions, and thoughts occurring in the mind during sleep or a sleep-like state, which takes the form of a sequence of events or of a story, having a feeling of reality but totally lacking a feeling of free will.

Dreams are primarily associated with REM and activated EEG. A combined duration of the REM-EEG condition called the D-state takes up 25% of normal sleep. The D-state depends on an area within the brain stem known as the pontine tegmentum. It is associated with a mechanism involving a chemical called norepinephrine. Other stages of sleep involve another chemical, serotonin, in the brain. The D-state is associated with variability in breathing, heart rate, and relaxation of skeletal muscles and reduction of electrical activity in muscles near the base of the tongue.

Research has found dreaming is associated with REM sleep. Most adults dream five to six times in one night. They occur every 90-100 minutes and last for 5-10 minutes because the D-state occurs episodically, each episode being longer than the preceding one. The pathways of the nerve impulses from the brain to the muscles are also blocked, so the body doesn't move during dreams.

DNA PROFILING AND ITS VALUE IN ESTABLISHING GUILT OR INNOCENCE

Thanks, perhaps, to the amount of crime drama we now consume as entertainment, the layperson today appears to believe that DNA evidence in a case is clinching — it can make or break a case.



But unclouded by what we see on our screens, what is the reality regarding the probative value of DNA in establishing guilt or innocence?

In mid-June, the Madras High Court set aside the conviction of a man who had been accused of rape in a POCSO case. The bench of Justices M. S. Ramesh and Sunder Mohan J. found merit in an appeal by the man, who argued that though it was subsequently proved that the victim falsely accused him of raping her, the DNA test establishing his paternity had dealt the blow, leading to his conviction. The judges held that the prosecution had not proved the case against the appellant beyond reasonable doubt, and therefore, set the conviction aside.

But that was not all. The judgement also examined, in detail, the wisdom of relying on DNA evidence alone to establish guilt. The facts in the case were thus: The victim had originally stated that the appellant had committed penetrative sexual assault on her, however, in her deposition, she said she had blamed the appellant, as she did not want her love affair with another man to come into the open for fear of criticism by relatives. The prosecution witness 1 too turned hostile, and in these circumstances, it would not have been possible to render a finding of guilt against the appellant, his counsel argued in court. Thus, the conviction was based on the DNA report, which compared blood samples collected from him and the victim's child. The report stated that the cumulative probability of the paternity of the appellant being the father of the child (of the victim) was 99.999999998%.

How DNA works?

DNA is deoxyribonucleic acid, and it is genetic material present in the nuclei of cells in living organisms. Justices Mohan and Ramesh relied on an article published by the Central Forensic Science Laboratory, Kolkata, explaining this in detail. An average human body is composed of about 100 trillion cells. DNA is present in the nucleus of a cell as a double helix, supercoiled to form chromosomes along with intercalated proteins. Twenty-three pairs of chromosomes are present in each nucleated cell, and an individual inherits 23 chromosomes from the mother and 23 from the father transmitted through the ova and sperm, respectively. All information about internal organisation, physical characteristics, and physiological functions of the body is encoded in DNA molecules in a language (sequence) of alphabets of four nucleotides or bases : Adenine (A), Guanine (G), Thymine (T), and Cytosine (C), along with the sugar phosphate backbone.

Since the same DNA sequence is present in every cell of the body (apart from mature red blood cells) therefore, DNA can be sourced from any biological material. This includes saliva, semen, vaginal fluids, blood, body tissues, teeth, hair, and bones. The quantity of DNA contained in biological material varies. Blood and saliva are richer sources of DNA as compared to teeth and hair roots, which are DNA deficient. DNA may be left behind on objects during physical contact, which is commonly referred to as touch DNA or trace DNA. Touch DNA contains very low amounts of DNA and is not an ideal source for DNA profiling, explains a paper in the Forensic Science India Report (2013–2017), which looks at the science underlying forensic DNA profiling and its value in criminal proceedings, notably admitting that there are inherent limitations to the process.

There is apparently much to say about the method for the collection, packaging, storage, and transportation of a DNA sample. Though it differs based on the source of the biological material and the conditions in which it is found, the idea is to ensure that the quality and quantity of DNA are preserved. There are well defined techniques for both the collection and transportation of various kinds of samples to prevent contamination and ensure the quality of the sample extracted.



How reliable is DNA?

But the moot question is: how reliable is DNA profiling in criminology? The basic fact we need to know is that the DNA in all human beings is 99.9% identical. In forensic DNA profiling, a few locations in the remaining 0.1% of DNA are chosen to create a person's DNA profile. These specific locations at which the DNA is examined are called loci. These loci have repetitive sequences of DNA called Short Tandem Repeats, or STRs. While every individual has the same sequence, or STR, on a locus, the number of times that it repeats itself may vary across individuals. This variation in the number of repetitions is referred to as alleles. At a given locus, an individual has two alleles, one inherited from the father and the other from the mother. The current genetic markers of choice for forensic purposes are STRs. STRs present on the Y chromosome are used in sexual assault cases or to determine paternal lineage.

DNA profiling is complicated, and each sequential step involved in generating a profile can vary depending on the facilities available in the laboratory. The analysis principles, however, remain: isolation, purification and quantitation of DNA, amplification of selected genetic markers, visualising the fragments and genotyping, statistical analysis and interpretation, the Kolkata lab explainer adds.

Manikanda Raj, head of forensic medicine and toxicology at Chengalpattu Medical College and Hospital, says DNA analysis as a process is based on probability and, in that sense, cannot be considered conclusive evidence. There are definite pitfalls, he says, particularly with sample contamination, where there is a delay in lifting the sample or testing it, when the sample becomes unviable, or the samples themselves are switched. "Then the tests turn out inconclusive. One way to ensure at least the right samples are tested is to videograph the entire process – something we have been following in Tamil Nadu — thanks to a directive by Justice P.N. Prakash." He's very clear that convictions cannot be made only on the strength of a DNA analysis, without other corroborating evidence.

How conclusive is DNA profiling?

The Madras High Court, in its verdict in the case, also explained possible outcomes, based on scientific resources. There are three possible outcomes of a profile comparison: (1) Match : If the DNA profiles obtained from the two samples are indistinguishable, they are said to have matched. (2) Exclusion : If the comparison of profiles shows differences, it can only be explained by the two samples originating from different sources. (3) Inconclusive : The data does not support a conclusion.

It also quotes a Law Commission of India report, 'A Review of the Indian Evidence Act, 2003', which observed that: "If the samples match, that does not mean the identity is conclusively proved. Rather, an expert will be able to derive from a database of DNA samples an approximate number reflecting how often a similar DNA "profile" or "fingerprint" is found. It may be, for example, that the relevant profile is found in 1 person in every 1,00,000 : This is described as the "random occurrence ratio". Thus, DNA may be more useful for purposes of investigation but not for raising any presumption of identity in a court of law."

In Pattu Rajan v. State of T.N. 2019, judges considered the value to be attached to a DNA report: "Like all other opinion evidence, the probative value accorded to DNA evidence also varies from case to case, depending on facts and circumstances and the weight accorded to other evidence on record, whether contrary or corroborative. This is all the more important to remember, given that even though the accuracy of DNA evidence may be increasing with the advancement of science



and technology with every passing day, thereby making it more and more reliable, we have not yet reached a juncture where it may be said to be infallible. Thus, it cannot be said that the absence of DNA evidence would lead to an adverse inference against a party, especially in the presence of other cogent and reliable evidence on record in favour of such party.”

FIGHTING MOSQUITO MENACE WITH REPELLENTS, VACCINES

Since 2007, WHO has called April 15 as the World Malaria Day to highlight the need for continued investment and sustained political commitment for malaria prevention and control. The book *Mosquitopia: The Place of Pests in a Healthy World* states that there are over 3,500 species of mosquitoes in every continent except Antarctica. India has over 12% of the world's mosquito population. B.K. Tyagi et al in the *Journal of Mosquito Research*, 2015, point out that India has 63 species of this pest, with *Anopheles* as the leading one. In 1902, Sir Ronald Ross received the Nobel Prize in Physiology/Medicine for having shown how malaria was transmitted by the bite of *Anopheles* mosquitoes infecting a human patient in Hyderabad suffering from malaria.

The National Centre for Vector-borne Diseases, of the Indian Health Ministry, points out that mosquito bites lead to malaria, dengue, filaria, Japanese encephalitis, and chikungunya, and suggests ways to control and win over these diseases with drugs and vaccines.

Across India, mosquitoes are most prevalent in highly water-borne areas such as Odisha, West Bengal, and the Northeastern states. However, even Pune, Delhi, Chennai, and Kolkata have shown a large increase in mosquito populations due to heavy rains and inefficient water handling.

Mosquitoes breed in stagnant waters such as agricultural farms, plant pots, gutters, bird baths, tires of bicycles, autos and other vehicles, and trash containers. Periodic cleaning of these will help in reducing mosquito growth. The Healthy Talbot website offers several simple ways to get rid of mosquitoes.

While some of these are usable in cities and towns, people in rural areas (where rice/wheat breeding occurs and has a lot of stagnant water) can use camphor and the leaves of 'tulsi' plants, both of which are used in their homes for prayers. The plant citronella offers an oil that is an effective mosquito-repellent, out of which the mosquito repellent Odomos is produced, which is available in the market for affordable prices, both as a cream to apply on the skin and as bandage-like sticky patches, which can be distributed across the country.

The widely used insect-repellent DEET was developed to protect soldiers during the Second World War. A simple change in the chemical structure of DEET improved the efficiency of this molecule. This indigenous product from Balsara Home Products was studied a decade ago by Mittal et al (*Indian Journal of Medical Research*, 2011) and is sold as non-sticky advanced Odomos. More such molecules are needed, and we look forward to organic chemists and biochemists to synthesise new molecules that can do even better.

Vaccines against malaria

In 2021, WHO recommended the malaria vaccine called 'Mosquirix', produced by Glaxo-Smith-Kline and PATH, in four doses for infants, and allowed it for large-scale use in some parts of Africa.

It is yet to be used elsewhere in the world. Two biotech firms in India have initiated programmes for the manufacture and supply of malaria vaccines. Bharat Biotech, which has already been working on some malaria-related vaccines, has tied up with GSK-PATH for technology transfer for



long-term supply of 'Mosquirix', and hopes to manufacture and supply it to people in India by 2026. In 2021, the WHO also recommended the R21/Matrix vaccine. Serum Institute (in collaboration with Oxford University) has produced the R21/Matrix vaccine; in mid-July this year the vaccine was rolled out in Cote d'Ivoire in West Africa, the first country to begin administering R21/Matrix-M. It is our hope that they will inoculate Indians soon, hopefully by World Malaria Day 2026.

WHAT IS THE NEW ALZHEIMER'S BLOOD TEST?

The story so far:

Researchers have developed a new blood test to detect Alzheimer's disease that helps diagnose the disease even at the early stage of mild cognitive impairment. Scientists at Lund University in Sweden have shown that PrecivityAD2, a new blood test, is about 90% accurate in identifying AD in people experiencing cognitive symptoms. The paper 'Blood Biomarkers to Detect Alzheimer Disease in Primary Care and Secondary Care' by Sebastian Palmqvist et al was published in the July 28 edition of peer reviewed journal JAMA.

Why are practitioners excited about the test?

According to statistics, one in five women and one in 10 men develop dementia due to AD (Alzheimer's disease). Individuals with cognitive symptoms are first seen in primary care, with a minority being referred to secondary care, authors of the article pointed out. Further they added that symptomatic AD is misdiagnosed in 25% to 35% of patients treated at even specialised clinics and likely even more patients treated in primary care.

For long, a blood test has been the Holy Grail for diagnosis of AD, since even current, modern methods of diagnosis involve very expensive and complex amyloid or Tau Positron Emission Tomography (PET) scans. The other alternative is to draw cerebrospinal fluid via a painful procedure, lumbar puncture. "The big goal is a serum study," explains neuropsychiatrist E.S. Krishnamoorthy of Buddha Clinic who has a special interest in dementia, whose most prevalent type is Alzheimer's disease. This blood test comes as close to the target as possible, and in that sense will make the diagnosis of AD very simple. Blood tests will not only reduce the costs of diagnosis, but also simplify the diagnostic procedure — involving as it does, just drawing of blood. There have been a few commercial attempts that went live before this test, but the current study has provided some definitive results.

In a statement to Medscape Medical News, Howard Fillit, co-founder and chief science officer of the Alzheimer's Drug Discovery Foundation, says: "Blood tests are revolutionising Alzheimer's detection, diagnosis and ultimately treatment." He believes that these tests will "soon replace more invasive and costly PET scans as the standard of care and serve as the first line of defence in diagnosing the disease." Dr. Fillit adds: "After many years of research, the field is in a place where we have novel biomarkers and diagnostics to support a diagnosis, the way cholesterol is used to help detect heart disease."

What does the test do?

According to Medical News Today, the test works by measuring a combination of two ratios within a blood sample: plasma phosphorylated-tau217 (also called p-tau217) to not-phosphorylated-tau21 and two types of amyloid-beta: AB42 and AB40. Let it suffice for us to understand that both tau and amyloid-beta proteins are currently considered pathological hallmarks of AD.



A total of 1,213 patients were already under evaluation for cognitive decline in primary or secondary care centres between February 2020 and January 2024 in Sweden. Of the participants, 23% had subjective cognitive decline, 33% had dementia, and 44% had mild cognitive impairment. About 50% of participants showed Alzheimer disease pathology through primary and secondary care testing. In comparison to the blood test that had an accuracy of 91%, dementia specialists identified clinical Alzheimer disease with a diagnostic accuracy of 73%, the researchers say in their paper. In primary care, physicians had a diagnostic accuracy of 61%, they add. They argue that this would be an accurate blood test for AD and that it could streamline the diagnostic workup and treatment of AD. The significance is that there are several drugs that work in the early stages of the disease, and an early, cost-effective, simple diagnosis will go a long way for patients, experts say.

How does this impact the future?

Future studies should evaluate how the use of blood tests for these biomarkers influences clinical care, researchers have said in their paper. No doubt the costs will come down, naturally impacting positively on affordability. Availability is the other issue. Dr. Krishnamoorthy says that in India, the diagnostic tools still remain an MRI and a regular PET scan. Amyloid or Tau PET scans are not commercially available yet. He adds that availability of the blood test will happen, but one needs to wait and watch if the test will be accessible to all or if only a few will be able to afford the test, even at reduced rates.

OROPOUCHE FEVER

- Brazil has reported the first-ever deaths from Oropouche fever, a mosquito-borne disease with symptoms similar to dengue.
- Oropouche is common in Latin America and the Caribbean. The virus was first detected in Trinidad and Tobago in 1955.
- Oropouche fever is caused by the Oropouche virus, which is transmitted most often through the bite of the *Culicoides paraensis* midge.
- Symptoms of the disease are similar to dengue and typically start between four and eight days after the bite. The onset is sudden, and symptoms usually include fever, headaches, pain, chills, joint stiffness and sometimes nausea and vomiting.

WHO LISTS OVER 30 PATHOGENS THAT COULD START THE NEXT PANDEMIC

Reminders that Covid-19 has not gone away pop up from time to time, even if the world seems to have moved on. More than 40 athletes at the 2024 Olympics in Paris have tested positive, signalling a new global rise in cases, the World Health Organization (WHO) said on August 6. The subgenus Sarbecovirus, of which SARS-CoV-2 is a member, now finds a place on the list of “priority pathogens” in the WHO’s recently-released ‘Pathogens Prioritisation’ report.

The report, which is a framework for epidemic and pandemic research preparedness, is the result of work that began in late 2022, involving over 200 scientists from 54 countries who evaluated the evidence related to 28 viral families and one core group of bacteria, encompassing 1,652 pathogens. The final list comprises over 30 ‘priority pathogens’.



On the list of priority pathogens, though not a new addition, is Nipah. A 14-year-old boy died at the Government Medical College Hospital, Kozhikode, Kerala, after contracting it. Both the Ebola and Zika viruses feature on the list, as they did in 2018, with both classified as “high” for a Public Health Emergency of International Concern or PHEIC risk. Maharashtra is currently grappling with a Zika virus outbreak — reports indicate there have been over 70 cases of Zika in Pune in the past two months, and these include 26 pregnant women.

The list of priority pathogens, says Chennai-based infectious diseases specialist Subramanian Swaminathan, is a pointer towards the pathogens that governments could allocate resources towards, for surveillance and medical countermeasures. This does not mean all of them are currently problems, he says, but it means that countries have to monitor these pathogens as they have the potential to turn into problems.

“Surveillance of these pathogens has to involve multiple aspects – is the pathogen spreading beyond a geographical area, is it becoming more virulent, is its transmissibility increasing, is the clinical manifestation of the disease it causes changing, is it becoming more resistant to known treatment, and does it have vaccine escape properties?” he says.

What else is new on the list? The dengue virus and the influenza A viruses, including the H5 subtype, which caused an avian influenza outbreak in India and which affected cattle in the United States are now on the list, along with mpox, which currently erupted in parts of Africa.

Among the bacteria, added to the list are those that cause plague, cholera, pneumonia, dysentery and non-typhoidal salmonella, a key cause of diarrhoeal diseases.

In the Southeast Asia region, the report notes that bacterial pathogens are priorities, including *Vibrio cholera* O139 (cholera) and *Shigella dysenteriae* serotype 1 (dysentery). Priority pathogens Henipavirus nipahense (Nipah) and Bandavirus dabiense (causes severe fever with thrombocytopenia syndrome) are endemic, as are the mosquito-borne Orthoflavivirus denguei (dengue) and Zikaense (Zika virus disease), and Alphavirus chikungunya.

JUDICIOUS USE OF SUCRALOSE AS SUGAR SUBSTITUTE HELPS DIABETICS: STUDY

A recent study from India examining the effects of replacing sucrose or table sugar with an artificial sweetener, sucralose, in coffee and tea, found no adverse impact on glucose or HbA1c levels, and in fact indicated a slight improvement in body weight, waist circumference and body mass index (BMI).

The article, “Effect of replacing sucrose in beverages with non-nutritive sweetener sucralose on cardiometabolic risk factors among Asian Indian adults with Type 2 Diabetes: a 12-week randomized controlled trial”, was published in *Diabetes Therapy* late July. Notably, the study comes shortly after the WHO cautioned non-diabetics against using non-nutritive sweeteners (NNS) to control body weight.

Senior diabetologist Dr. V. Mohan, chairman of the Madras Diabetes Research Foundation, who led the study, said: “We started this study even before the WHO’s report on sugar substitutes. We wanted to assess if there are any changes, because in India, sweeteners are used only sparingly instead of sugar, in tea and coffee, compared with the West. The study shows that there is no harm in taking sweeteners. In fact, there was a marginal improvement in body weight, BMI and waist circumference with no impact on glucose or HbA1c levels. This is a very important point to bring



out to the public, since there is so much of negative publicity against sweeteners, which I feel is totally unfounded.”

This 12-week, parallel-arm randomised controlled trial included 210 participants with T2D, assigned to the intervention group, where sugar/sucrose in coffee or tea was substituted with sucralose, or the control group, where sugar/sucrose was continued. The primary outcome was change in HbA1c. At the end of the study, researchers found no significant change in HbA1c levels between the intervention and control groups. However, favourable changes were noted in the BMI, waist circumference and mean body weight, the paper said.

Dr. Mohan said the judicious use of NNS can help in cutting down calories, sugar intake and increase dietary compliance. More studies are underway on the safety and efficacy of sucralose, he said.



DreamIAS