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INTERNATIONAL

WHAT IS THE CASE AGAINST HUNTER BIDEN AND COULD HE GO TO JAIL?

A 12-person jury in Wilmington, Delaware, on Tuesday found President Joe Biden's son Hunter, 54, guilty of lying about his drug use on a form while purchasing a gun in 2018. He faces a maximum of 25 years in prison. This marks the first criminal prosecution of a sitting US President's son/daughter. He may or may not actually go to jail, however.

This was also the first of Hunter Biden's two trials. He has been separately indicted in California over tax charges. That trial will likely begin in September.

What is the case against Hunter Biden?

Nearly six years ago, Hunter bought a Colt Cobra .38 handgun while he was allegedly addicted to crack cocaine. According to US federal law, users of illegal drugs cannot own firearms.

As part of the purchase, Hunter also lied about his drug use on a Bureau of Alcohol, Tobacco, Firearms and Explosives form (filled out for a background check), according to the prosecutors.

The gun became an issue after his brother's widow, Hallie Biden, with whom Hunter was romantically involved at the time, found it in his truck's console and threw it in a trash can outside a grocery store. Hallie claimed that she did so because she became concerned Hunter might harm himself. "I realise it was a stupid idea now. But I was panicking," she testified.

When Hunter realised that the gun was missing, Hallie informed him over texts that she had thrown it away. "Are you insane," he allegedly texted, an ABC News report said.

Hallie went back to the trash can to retrieve the gun, but it was not there. An elderly man, who was looking for recyclables, had found it and taken it home. Subsequently, Delaware police recovered the gun from the man.

Convicted on three counts

Hunter has been found guilty on three counts, two of which are related to the application that he had filled out during the purchase of the gun. He has been convicted of making a false statement on a federal form and lying to a licensed gun dealer.

The third count pertains to his possession of the gun while under the influence of drugs.

"When the defendant filled out that form, he knew he was a drug addict...The law does not require us to prove that he was using drugs on that very day. Just that he knew he was a drug user," prosecutor Derek Hines said during the trial.

What happens next?

The verdict comes with the possibility of prison time for Hunter, but it is unclear how likely that is, mainly because Hunter's offence was nonviolent and he has claimed to be sober since 2019.

The judge has not set a date for sentencing. While President Biden has said he will respect a jury's decision (he had earlier ruled out pardoning his son), Hunter's legal team is considering filing an appeal.

RIGHT TURN

Even before votes of the European Parliament elections were counted, they had delivered their first shock, with French President Emmanuel Macron dissolving France's National Assembly. The results, which have given Mr. Macron's Renaissance party a shocking loss to the far-right National Rally party in the European Parliament, led him to take the risky gamble of calling for fresh elections, due to be held on June 30 and July 7. While Mr. Macron hopes to force the French voter to give his party a majority in Parliament, it could well deliver him another loss, damaging his own presidency, which at present lasts until 2027. Although the final count (still provisional and being counted in many of the 27 EU countries) is expected to give the centrist party coalitions a majority of the 720 seats in the European Parliament, the results have given far-right and ultra-nationalist parties a boost in Germany, France and Austria, delivering a jolt to the ruling parties, while confirming support for Italian Prime Minister Giorgia Meloni's far-right "Brothers of Italy" party. In addition, the Green parties have also been dealt a blow. As EU President Ursula Von Der Leyen cobbles together a coalition for another term in office, more than the vote count, it is the issues that led to the surge in support for ultra-right parties that will require study. These include a backlash against immigration, inflation and economic slowdowns, and a pushback to environmental reforms that are compounding losses. In a speech kicking off the campaign for her European People's Party — it remains the single-largest in Parliament — she warned that "European values" were at stake in these elections. "Our peaceful and united Europe is being challenged like never before by populists, by nationalists, by demagogues — whether from the far right or the far left," she said, pointing to challenges from within Europe and Russia's war in Ukraine.

For the world, the European vote may change little in terms of policy direction. Even so, it is important for New Delhi to look more closely. Concerns over immigration are widespread, and will require the government to control illegal immigrants leaving India's shores, while negotiating better terms on mobility agreements to facilitate more jobs for Indian professionals and workers. The EU has been India's third largest trading partner, and any protectionist shift in posture in Europe now could derail the sensitive India-EU Bilateral Trade and Investment Agreement negotiations. Divisions within the European Parliament over conflicts that include Ukraine and Israel will not affect New Delhi directly, but a larger trend of fragmentation and disunity in the EU would affect the international order. The EU-India summit is now expected in early 2025, when India will seek closer engagement on all these issues. More immediately, Prime Minister Narendra Modi, who leaves for Italy's Apulia on Thursday to attend the G-7 outreach, will meet his European counterparts and the EU leadership, where they will take stock not only of the European Parliament elections but also the Indian elections, that threw up an unexpected result.

WHAT IS HAPPENING IN FRENCH TERRITORY OF NEW CALEDONIA?

The story so far:

On June 3, the Socialist Kanak National Liberation Front (FLNKS) of the south pacific French territory of New Caledonia called for French President Emmanuel Macron to abandon the plan to modify the electoral reform.

What happened?

Widespread protests and riots erupted in New Caledonia in response to the French parliament's decision to amend the voters' list. The new amendment bill will pave the way for incorporating

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citizens who were either born or lived in the territory for at least 10 years. Kanaks, the indigenous community of the territory, opposed this on claims that it diluted their electoral power thus marginalising them. The Kanaks comprise 43% of the 1,45,000 population, while the European (French loyalists), Wallisians and Futunians comprise 37%. The new voting amendment will give majority to the loyalists undermining the Kanaks' future towards decolonisation. This would also mean an alteration of the internal political environment towards French settlers.

What is history of the archipelago?

New Caledonia had Kanaks as the original inhabitants. France gained control of the territory in 1853 and governed the Kanaks with reservations. After the Second World War, colonial laws were abolished and the Kanaks were granted French citizenship. In the 1960s, increased migration from France turned the Kanaks into a minority in New Caledonia. Angered by their deteriorating socio-economic status and lack of economic and political involvement, an independence movement grew along with the emergence of the FLNKS in 1984. Thus, tensions soared between the Kanaks and loyalists between from 1984 to 1988 which ended with the signing of the Matignon agreements in 1988 and the Nouméa Accord in 1998 between the Kanaks and the French government. This allowed the transfer of powers from Paris to local authorities along with three referendums to decide the territory's independence.

The independence referendums held in 2018 and 2020 were in favour of France, and against an independent New Caledonia. Kanaks requested to postpone the third and final referendum due to COVID-19 in 2021, but the French disregarded the request. A lower turnout ensured a 96% result against an independent state. This infuriated the Kanaks who then opposed talks with the French government.

Why do Kanaks want independence?

Post World War II, after the granting of French citizenship and transforming the French colonies into overseas territories, New Caledonia's migration pattern increasingly reflected that, of what the Kanaks call, "settler colonialism."

Under this new model, social inequalities widened leading to the exploitation of the indigenous community. This was observed in the steel and nickel mining sectors, where indigenous people remained as labour while the non-indigenous people reaped economic and political benefits. And despite France's promise to reverse social inequalities and better Kanaks' political participation, the 2019 census showcased the poverty rate among Kanaks to be 32.5%, while only nine per cent of non-Kanaks experienced poverty. The scope of economic progress being stalled and the vote by the French Parliament to alter the electoral composition is seen as a move to end Kanak independence.

What is the French endgame?

First, achieving tactical peace. More violence would mean an increased threat to overseas French citizens and a risk to Mr. Macron's party's reputation.

Second, integration is key to France's Indo-Pacific strategy. France considers itself an Indo-Pacific power through its overseas territories which combined makes it the second largest Exclusive Economic Zone (EEZ). Additionally, the large number of French citizens authenticates French governance. The Islands represent a strategic position for France in the Indo-Pacific, especially

against China. Therefore, to seal its presence in these territories, integration becomes necessary which is difficult as Kanaks demand independence.

BANANAS: WHY CHIQUITA, A FRUIT COMPANY, PAID TERRORISTS IN COLOMBIA

Banana giant Chiquita Brands International was found liable for financing the United Self-Defense Forces of Colombia (AUC) by a federal jury in Florida on Monday (June 10).

This landmark verdict comes after 17 years of civil litigation by the families of eight men killed by the AUC. Chiquita has been ordered by the jury to pay these families $ 38.3 million in damages. This is the first time a major US corporation has been held liable for its role in human rights abuses.

The AUC was a far-right paramilitary and drug-trafficking group which came up in the late 1980s to protect landowners from left-wing rebels. But it ended up being among the worst perpetrators of human rights abuses in Colombia, as well as among its biggest drug traffickers. It was most active between 1997 and 2004, with the US designating the AUC as a terrorist organisation in 2001.

How did a fruit company get involved with a terrorist organisation?

A controversial legacy

Founded in 1899 as the United Fruit Company, Chiquita is one of the world's largest banana producers and distributors. Most of Chiquita's produce comes from Central and South America, but are sold in the United States, Canada, and Europe.

Over the years, Chiquita has been accused of shaping the political and economic landscapes of several Latin American countries, influencing governments, and exploiting workers. For instance, in 1952, when Guatamalen President Jacobo Arbenz introduced land reforms which would take away United Fruits' land among poor peasants, the company lobbied the US government to have him overthrown. He would be overthrown in a CIA-backed coup in 1954.

Despite United Fruit's 1990 rebrand to Chiquita (literally 'little girl' in Spanish), the company continued to operate in questionable ways in Latin America, as its involvement in Colombia shows.

Supporting 'terrorists' in Colombia

Since 1964, Colombia has been embroiled in a low-intensity civil war, with the government, crime syndicates, right wing paramilitaries like the AUC, and left-wing guerrilla groups such as the FARC, fighting each other for influence and control over territory.

Chiquita, which operates large banana plantations in Colombia, gave significant financial and arms support to the AUC, totalling to over $ 1.7 million over seven years, in order to "secure its operations" and "ensure safety" of its employees. Court documents show that Chiquita continued making these payments even after the AUC had been designated as an international terrorist organisation in the US in 2001, with senior executives seeing this as the "cost of doing business in Colombia", The Guardian reported.

Chiquita also allowed the AUC to use its ports to import automatic rifles and its banana boats to smuggle cocaine across the seas, new evidence presented in Florida courts showed.

CHINA'S 'GREY-ZONE' WARFARE TACTICS AGAINST TAIWAN

The story so far:

Since the new Taiwanese president Lai Ching-te has assumed office, all eyes have been on the rocky start to his tenure. While China's belligerent response to Mr. Lai's "pro-independence" and "secessionist" statements was striking, it has now resorted to a sophisticated ploy to respond to Mr. Lai's Democratic Progressive Party (DPP). This is often referred to as 'grey-zone' warfare, which comprises elements that frustrate Taiwan in a sustained manner.

What has China done?

China's preparedness to invade Taiwan and fight a high-intensity war over the island is a much debated subject. Training drills in the People's Liberation Army Eastern Theater Command (PLA ETC) are targeted precisely at demonstrating China's ability to fight and win. However, a more cognitive tool that Beijing is deploying to demonstrate this ability is simulated audiovisuals. On May 24, for example, the PLA ETC Weibo account released a 3D animation video depicting how in an invasion scenario, land-and warship-based ballistic missile launchers would fire tens of missiles at one go, striking areas in Taipei and Kaohsiung.

Moreover, since 2020, the X account of the Taiwanese Ministry of National Defence has turned into a repository of reportage on daily sorties conducted by PLA fighter jets, unmanned aerial vehicles (UAVs), strategic fighters and early warning aircraft. While such sorties do not engage the island's defence forces directly, they exert sustained pressure on them. Further, these UAVs also conduct intelligence work in the areas surrounding the island. The long term presence of such mobilisation induces wear-out within Taiwanese forces, even before there is kinetic combat.

What about ideology?

To build a favourable image for itself, Beijing often deploys narratives within Taiwanese territory that thrust ideological choices upon its citizens. For example, sometime on May 25, just under a week after Mr. Lai assumed office, internet users in Taiwan observed a Youtube video of a Chinese citizen operating a drone to drop cardboard boxes on Kinmen island. When investigated by the Kinmen Defence Command on May 26, the boxes unveiled fliers written in simplified Chinese, stating "Both sides of the Taiwan Strait belong to one China, one Chinese nation. Taiwan independence is a dead end. Lai's Taiwan independence is a dead end." Some other fliers warned, "Don't sacrifice your life for Taiwan independence, do you understand?"

The Kinmen Command stated that this was "a typical cognitive warfare tactic" deployed by China, because it initiates public discussions on social media, and garners attention for the Chinese cause.

What are political tactics China uses?

In its 'carrots and sticks' approach towards Taiwan, Beijing deploys sticks for the DPP and carrots for its primary opposition party, the Kuomintang (KMT). Well known for its relatively pro-mainland views, the KMT continues to engage with Communist Party (CPC) officials, even as any meaningful communication between the DPP and the CPC has stalled since Ms. Tsai became President of Taiwan in 2016. DPP legislators have often described these engagements as KMT's "collusion" with the CPC. In fact, KMT officials have, in the past, been investigated by the Tsai administration under the 'anti-infiltration law' after their visits to China.

China's 'sticks' against the DPP entail coercive economic measures, which leverage the cross-strait trade and business interdependence to seek concessions. One such example is China's unilateral suspension of preferential tax rates for chemical imports from Taiwan, granted under the only trade agreement to exist between the two sides — the Economic Cooperation Framework Agreement (ECFA). Beijing announced that such a suspension, applicable to 134 items imported from Taiwan, is retaliation against Mr. Lai's propagation of "separatist" sentiments in his inaugural speech, as well as Taipei's own restrictions against imports of over 2,000 goods made in China.

As 'grey-zone' warfare tactics become a subject of deliberation, Mr. Lai will have much to grapple with during his tenure.

ONE MORE CHANCE

President Joe Biden's three-phase ceasefire plan for Gaza got a major boost on Monday with the UN Security Council (UNSC) resolution asking Israel and Hamas to accept the proposal. The U.S. says Israel has already agreed to the deal laid out in the resolution, adding that Hamas's tough position was the main hindrance to a ceasefire. This is the second time since the war began on October 7, 2023 that the UNSC is calling for a Gaza ceasefire. In March, the Council's call was ignored by Israel. If the U.S. had abstained from voting then, letting the resolution pass, this time, Washington is the force behind the proposal. According to the Biden plan, which the U.S. President says was laid out by Israel, there would be a six-week long ceasefire in the first phase. Israeli troops would pull back from densely populated areas, allow more aid trucks into Gaza, and release Palestinian prisoners in exchange for 33 hostages held by Hamas. In the second phase, Hamas is to release the remaining hostages while Israel is expected to withdraw from the Gaza Strip. The third phase would see the enclave's reconstruction.

While the Biden administration, which backs Israel's war on Gaza, is actively pushing for this plan, there are serious hindrances on both sides. The U.S. has repeatedly said that the proposal has the blessings of Israel, but the Benjamin Netanyahu government has not publicly endorsed the plan. Mr. Netanyahu was politically weakened last week when opposition politician Benny Gantz quit the unity government, leaving Prime Minister Netanyahu more dependent on his far-right allies. And the far-right parties in the ruling coalition have threatened to break the government if he accepted the ceasefire proposal. So the question is whether Mr. Netanyahu could place the country's interests above his political survival. On the other side, Hamas demands an immediate Israeli withdrawal from Gaza's Rafah crossing with Egypt, total freedom in choosing the Palestinian prisoners to be released and guarantees from China, Russia and Türkiye for a final agreement with Israel. As both sides harden their stances, truce remains elusive. Since the war began, at least 37,000 Palestinians have been killed by Israel and 2.3 million people displaced. Israel has repeatedly ignored pleas to protect civilian lives, while Hamas has shown little interest in making concessions to clinch a ceasefire deal. Israel wants the hostages to be freed. Hamas wants the war to be over and Israeli troops to be out of Gaza. They should realise that the only way to meet these objectives is to strike a negotiated deal, rather than prolonging the war that has destroyed much of Gaza and turned Israel into an internationally isolated rogue state.

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NATION

A REBOOT AT G7

"In his first trip abroad during his third term as prime minister, Narendra Modi will attend the summit of the leading Western nations — the so-called Group of Seven — in Fasano, Italy…The PM will now have a chance to reconnect and reboot the relations with the leaders of the West at the meeting of the G7 which is marking its 50th anniversary this year."

— "The G7 summit will also showcase the growing conflict between the West on the one hand and the Sino-Russian alliance on the other. This presents major new opportunities as well as challenges to Indian diplomacy."

— "India, which has been a regular invitee to the G7 gatherings in the last few years, has a stake in developing deeper collaboration with the institutions of the so-called "collective West"."

— "Italy's decision to focus on the G7's engagement with Africa and the Mediterranean at the Fasano summit also creates the basis for a more imaginative regional engagement between Delhi and Rome as well as India and the G7. The connections between Mediterranean Europe and India's extended neighbourhood in Arabia and Africa have now come into Delhi's policy focus."

— "India will also have much interest in the discussion on food and energy security, a major item on the G7 agenda in Italy. India has flagged both issues in the wake of the Russian invasion of Ukraine in February 2022."

— "As great power conflict throws the world into dangerous disarray, the next few weeks will provide Modi and his advisers an opportunity to engage all the major actors, assess the competing imperatives among them, and think through Indian strategy and tactics in navigating the new dynamics."

For Your Information:

— The G7 is an informal forum of leading industrialised nations, which include Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. Representatives of the European Union are always present at the annual meeting of the heads of state and government of the G7.

SIGNIFICANCE OF MALDIVES' PRO-CHINA PRESIDENT MUIZZU'S NEW DELHI VISIT

The President of Maldives, Mohamed Muizzu, was one of seven leaders from India's neighbourhood who attended Prime Minister Narendra Modi's swearing-in at Rashtrapati Bhavan on Sunday evening (June 9). Muizzu's presence was significant, given the way he has positioned himself politically vis à vis India, and the crucial strategic aspect to the India-Maldives relationship.

The 'India Out' candidate

Muizzu came to power on November 17 last year on an 'India Out' plank. The India Out campaign had begun in 2020 as the Maldives opposition's protest against then President Ibrahim Solih's policies that were perceived to be friendly towards New Delhi, but had soon turned into a movement against India's alleged military presence in the archipelago, which both the Solih government and India denied.

During his presidential campaign, Muizzu repeatedly vowed to send back "foreign soldiers". Within hours of being sworn in, he demanded the withdrawal of all Indian military personnel from Maldives.

Consequently, the final batch of Indian soldiers — who were stationed in the Maldives to operate and maintain two helicopters and three Dornier aircraft India had previously gifted to the country — were replaced by civilians in May.

Muizzu's pro-China tilt

Like his mentor, former President Abdulla Yameen Abdul Gayoom, under whose rule (2013-18) the India-Maldives relationship deteriorated severely, Muizzu has openly aligned his country with China, India's geopolitical rival in the Indian Ocean.

In January, Muizzu broke with a Maldivian tradition to choose Beijing over New Delhi for his first foreign visit as President. He met President Xi Jinping, and signed 20 agreements covering areas ranging from tourism to social housing and e-commerce.

In March, Malé signed an agreement with Beijing to obtain free "non-lethal" military equipment and training from China — the first ever military deal between the two countries.

The Chinese influence in the Maldives has increased steadily over the past couple of decades. The island nation is part of China's Belt and Road Initiative, which has led to an influx of Chinese money and a strengthening of the relationship between the two countries — at the expense of India.

Muizzu's presidency and the anti-India sentiment fanned by sections of the Maldivian political class is a culmination of this process.

A historical relationship

For India, the Maldives is a crucial ally, important to secure its maritime periphery and to keep an eye on the larger Indian Ocean region where China is making aggressive moves. The archipelago lies barely 70 nautical miles (130 km) from Lakshadweep's Minicoy Island, and some 300 nautical miles (560 km) from India's west coast. Several important commercial sea lanes run through the islands.

Regardless of Muizzu's pro-China, anti-India posturing, the Maldives cannot simply "let go" of India. It is heavily dependent on Indian imports in almost all important sectors, from food to life-saving medicines, and aircraft used in search and rescue missions.

India has rushed to the Maldives' aid in many crises — from being the first to send in help after the 2004 tsunami to airlifting drinking water to the country after a desalination plant broke down in 2014. During the Covid-19 pandemic, India sent medicines, masks, gloves, PPE kits, vaccines, and other aid.

The Indian Army played a crucial role in thwarting an attempted coup in Malé in 1988. "Across party lines in the Maldives, they don't criticise this operation. They will mention other issues that they have with India, but not this," Maldives expert Dr Gulbin Sultana had told The Indian Express in 2021.

Chance of a fresh start

At a time when relations between India and the Maldives are at a low, Muizzu's visit sends an encouraging signal. Some groundwork for a reset in the relationship has been done over the past couple of months.

In April, India approved the highest-ever export quotas for essential commodities — eggs, potatoes, onions, sugar, rice, wheat flour and pulses, river sand and stone aggregates — to Maldives for 2024-25 under a unique bilateral mechanism that has been in effect since 1981.

On May 9, Maldives Foreign Minister Moosa Zameer met External Affairs Minister S Jaishankar in New Delhi — the first high-level visit since Muizzu came to power. The two leaders had "extensive discussions" on "bilateral relationship" and "regional security issues".

After a meeting with Muizzu on Monday, Jaishankar, on X, said, "Look forward to India and Maldives working together closely".

INDIA'S FOREIGN POLICY IN MODI 3.0: A LOOK AT CHALLENGES AND OPPORTUNITIES

What could the foreign policy of the Narendra Modi government in its third term look like? With no change at the top at the Ministry of External Affairs, a broad continuity is indicated. However, there will be some calibration and re-setting of the agenda for specific regions, depending on the changing global situation and Indian strategic imperatives.

The neighbourhood

Leaders of seven countries in India's neighbourhood — Bangladesh, Bhutan, Nepal, Sri Lanka, Maldives, Mauritius, and Seychelles — attending the swearing-in of the new government. Pakistan, Afghanistan, and Myanmar were not invited.

There was no substantive bilateral meeting with any neighbourhood leader.

India will have to be nimble in its diplomacy in the neighbourhood, and be unilaterally generous without insisting on reciprocity. Several neighbours look forward to a restrained and sensitive Modi 3.0 rather than an overbearing New Delhi that frequently flexes its muscle.

PAKISTAN: For his 2014 swearing-in, Modi had invited the leaders of SAARC countries, including Prime Minister Nawaz Sharif of Pakistan. India's engagement with Pakistan went through ups and downs in 2014 and 2015, before being wrecked by the terrorist attacks in Pathankot and Uri in 2016.

In 2019, the Pulwama attack and Balakot strikes fuelled nationalist sentiment in India and contributed to the BJP's victory. But ties with Pakistan suffered a grievous setback. The constitutional changes in J&K in August 2019 was the final blow that led to the downgrading of the diplomatic relationship.

The situation in Pakistan has changed since then. Imran Khan, who was Prime Minister in 2019, is in prison, the economy is in deep crisis, and the Sharifs, who are now backed by the Army, are back in power. Nawaz and his brother, Prime Minister Shehbaz Sharif, have reached out with messages of hope and peace.

Modi has responded that "security" — that is, countering Pak-backed terrorism — is India's priority. New Delhi's policy line for the last nine years has been that "terror and talks can't go together". The series of terror attacks in J&K over the last few days have put paid to any potential build-up of public opinion in favour of a possible engagement.

AFGHANISTAN: There is no diplomatic relationship with Kabul since the Taliban captured power in August 2021. There is low-level engagement through a technical team assigned to help in humanitarian aid, but high-level engagement has been ruled out for now. A working relationship is likely to continue.

MYANMAR: The challenge has been to engage with the junta government that has been preoccupied with armed resistance internally. Myanmarese government forces have been on the defensive since the fighting began in October 2023. It has been suggested in Indian strategic circles that given the possibility of the government's collapse, New Delhi should start engaging with the opposition groups.

MALDIVES: The visit of President Mohamed Muizzu, who rode to power on an "India Out" plank, was especially significant. After India replaced military personnel manning Indian air assets in Maldives with trained technical personnel as requested by the Muizzu government, New Delhi and Malé have appeared ready to engage.

BANGLADESH: Campaign rhetoric about "infiltrators" has often soured ties with Dhaka. Greater restraint from members of the government and the ruling party during Modi 3.0 is likely to be beneficial, since both sides have a common purpose in countering extremism, radicalisation, and terrorism.

BHUTAN: India has been ready to support Thimphu with assistance in its five-year plan, a financial stimulus package, and the Gelephu mindfulness city project. This is expected to continue, especially since China is trying to negotiate the border with Bhutan on its own terms. India wants Bhutan, which is caught between the two Asian giants, on its side.

NEPAL: Ties with Nepal present a delicate challenge. China has a strong political footprint in Nepal, and the government in Kathmandu in which former Prime Minister K P Sharma Oli is an important player, is perceived to be trying to use the Beijing card against New Delhi. The decision to put the unilaterally redrawn borders of Nepal on the national currency suggests this will continue. New Delhi will have to work hard to regain the trust of the Nepali people that took a blow after the economic blockade of 2015.

SRI LANKA: The goodwill gained by India on the Sri Lankan street after helping out with the island nation's financial crisis was jeopardised by the needless raking up of Katchatheevu ahead of elections in Tamil Nadu. Strengthening the Sri Lankan economy with financial assistance as well as investments will be a key task ahead of elections in that country later this year.

SEYCHELLES & MAURITIUS: India's plans to help upgrade ports infrastructure in these countries is part of its maritime diplomacy and security effort. Some success has been achieved at Agalega Islands in Mauritius, but developing Assumption Island in Seychelles has presented a challenge.

The Western countries

The Modi government's engagement with the West has been more transactional than several previous governments. It has also developed strong strategic ties with the US, Europe, Japan, and Australia.

There was a lot of noise during the campaign about Western "interference", provoked by criticism of the government in Western media. The aggressive Indian response showed that the government, even after a decade in office, remains extremely sensitive to commentary in the West, and sometimes to even anodyne comments by Western governments. Démarches were issued against friendly Western governments like the US and Germany in election season.

The Indian relationship with the US has bipartisan support and is not expected to be impacted by the outcome of the November presidential elections. Defence and cutting edge tech will drive ties going forward.

Economic and political ties with European countries such as France and Germany have improved, and the UK has been keen to conclude a Free Trade Agreement (FTA) with India. India and the EU too are keen to conclude an FTA to the mutual benefit of their economies.

The alleged plot to assassinate Khalistani separatist Gurpatwant Singh Pannun has been a major sore point with the West, which views India as a democratic, rule-of-law-abiding partner. The visit of US National Security Advisor Jake Sullivan next week will test the strength of Indo-US diplomatic ties, and perhaps indicate a path to unlocking this issue.

Political ties with Canada — in free fall ever since Prime Minister Justin Trudeau accused India of having a hand in the murder of another Khalistani separatist — are likely to remain strained at least until the Canadian elections of 2025. However, economic ties and student flows to Canada have not been impacted.

The West would like Modi 3.0 to be less thin-skinned about criticism and comments, and be ready to engage and do business with them. From New Delhi's perspective, the ideal scenario would be to secure Indian interests and benefit from Western capital and technology while not being lectured on its domestic matters. The PM's engagements at the G7 in Italy might signal steps in this direction.

The China challenge

The border standoff is about to enter its fifth year, and the task before Modi 3.0 is difficult and knotty.

India has maintained that all cannot be well until the border situation becomes normal. New Delhi wants complete disengagement and then de-escalation, and it will take a lot of time to move 50,000-60,000 troops and weapons away from both sides of the border.

High-level engagements, especially Modi's meeting with President Xi Jinping in Kazakhstan in the first week of July on the sidelines of the SCO summit, may hold potential for an unlock.

Tightrope on Russia

India's ties with Russia are being tested by the war in Ukraine. Defence requirements are at the heart of India's Russian dependency, and the availability of cheaper oil has now added energy to the basket.

Russia has not collapsed under Western sanctions, and it is now widely seen as having the upper hand in the war.

India is likely to skip the June 15-16 peace conference in Switzerland at the highest level, given that Russia will not be in the room. But India is expected to be represented at an official level, and to emphasise on dialogue and diplomacy. For peace, both Russia and Ukraine must come to the table, and while Modi 3.0 would want to contribute to the process, it would not like to cause hurt to itself.

High stakes in West Asia

Modi 1.0 and 2.0 built ties with countries and leaders in the region, from Saudi Arabia to Israel, UAE to Iran, Qatar to Egypt. Energy security, investments, and the 9-million-strong Indian diaspora in the region have been the major stakes for India.

The India-Middle East-Europe Economic Corridor (IMEC), I2U2, International North South Transit Corridor (INSTC) are all thought to be game changers, but the Israel-Hamas conflict has introduced uncertainty.

India would be keen to see the end of the war in Gaza.

DEATH OF WORKERS IN KUWAIT UNDERLINES VULNERABILITY OF INDIAN MIGRANTS

The death of 45 Indian workers in a fire in Kuwait is a reminder of the dismal working conditions of a large, and often ignored, section of the Indian diaspora. The labour camp that was gutted on Wednesday was reportedly packed beyond capacity. The rapid spread of the blaze and the high number of casualties indicate that the six-storey building did not have adequate safety provisions, such as fire exits and fire-fighting equipment. The Kuwait government has ordered an investigation and assured that the guilty will be held to account. The country's deputy prime minister has asked the Kuwait Municipality and the Public Authority of Manpower to address similar violations elsewhere, where a large number of workers are crowded into residential buildings. India's Minister of State for External Affairs Kirti Vardhan Singh has reached the Gulf nation to ensure early repatriation of mortal remains and speedy medical assistance to the injured. But the Centre and state governments must do much more — they should use the growing goodwill for India in the West Asian countries to guarantee the well-being of the migrant labour force.

According to the Ministry of External Affairs data, nearly 8.8 million Indians live and work in the Gulf. The money they send back home makes for more than a fourth of the diaspora's annual remittances. In Kuwait, Indian carpenters, masons, electricians, construction site labourers, factory and domestic workers and food delivery agents constitute nearly a fifth of the country's workforce. Several studies and reports have shown that they are vulnerable to exploitation by employers. Two years ago, for instance, an investigation by this newspaper underlined the precarity of the lives of Indian workers employed in the construction of soccer stadiums in Qatar. While the significantly high salaries in the Gulf continue to make countries in the region a favoured employment destination, at the same time, the availability of a large number of unskilled and semi-skilled workers and footloose labourers reduces the bargaining capacity of the migrants. Many are recruited through the visa sponsorship, or kafala system, which binds workers to their employers, severely limiting the capacity of the migrants to seek better housing or occupational safety improvements. Fear of loss of employment or deportment prevents most from complaining about the quality of working or living conditions.

India has signed MoUs with West Asian countries, including Kuwait, to streamline procedures for recruiting workers and providing them with legal protection. However, the course of legal redress is prolonged, court processes are expensive and an already vulnerable community has to contend with the absence of legal assistance and shortage of interpreters in an alien country. The problem also is that India deals with migration through a 40-year-old Emigration Act, which leaves the migrant worker at risk. In the Budget session of Parliament last year, the External Affairs Ministry acknowledged the need for an updated law to deal with migration issues. That piece of legislation is still in the works. The toll taken by the Kuwait fire is a reminder that the new government has to do much more to safeguard the lives of Indians who go abroad to work.

TERROR ATTACK IN REASI UNDERSCORES FRAGILITY OF A HARD-WON PEACE IN J&K

In January, Home Minister Amit Shah flagged the decline in terrorist incidents in Jammu and Kashmir — they were down, he said, by 66 per cent since the abrogation of Article 370. Two months later, in his first visit to the Valley since the abrogation of Article 370, Prime Minister Narendra Modi spoke of a heartening rise of tourism in J&K. Higher voter turnouts in most parts of the Union Territory in the recently concluded Lok Sabha elections added to the stirrings of hope and optimism. Now, a terrorist attack on a bus carrying pilgrims, on the day PM Modi and his council of ministers were being sworn-in in Delhi, has underscored the fragility of peace. The strike has claimed nine lives and it's disturbing that it occurred in Reasi, a district where militancy has had a relatively small imprint. The last time terrorists struck in the region was in May 2022, when a bomb attack killed four Vaishno Devi pilgrims and injured more than 20.

Reasi, along with Rajouri and Poonch, was a hotbed of militancy in the 1990s. Subsequently, the three districts in Jammu seemed to have contained the insurgency, until 2021, when terrorists attacked an army patrol in Poonch killing nine soldiers. In the past three years, terror attacks in Rajouri and Poonch have killed 38 soldiers and 11 civilians. The strengthening of the counter-infiltration grid in the Kashmir Valley could be a possible reason for a shift in terrorists' actions towards these Jammu districts. However, unlike Rajouri and Poonch, Reasi is not close to the LoC. The pressure from security forces in the two districts, where terrorism has raised its head again since 2021, could have forced the militants to search for a new battleground. This development poses new security concerns. The Pir Panjal range, which separates Kashmir from Jammu, runs through the three districts. Passes in the range provide seasonal access to PoK and the Pir Panjal's difficult terrain and dense forests allow the militants escape routes as well as launchpads for the attacks. The Reasi strike testifies to this mode of operation — militants reportedly hiding in a forest ambushed the bus carrying pilgrims.

After the conditions imposed by the FATF in Pakistan in recent years, terrorist outfits such as the Lashkar-e-Taiba (LeT) have often used proxies to avoid international scrutiny. The Resistance Front (TRF), one such group, has reportedly claimed responsibility for Sunday's attack. The outfit's presence in J&K is borne out by the UT police's records. Its data for 2022 shows that most of the militants killed in J&K belonged to either the LeT or TRF — an indication of the persistence of some of the clandestine networks, developed in the past 30 years. Historically, however, insurgency in the Jammu region has not been sustained for long because it lacked local support. In fact, in July 2022, Reasi residents had overpowered LeT militants and handed them over to security forces. The Centre must step up its vigil in the wake of the Reasi strike, even as it moves towards honouring its commitment to holding assembly elections in J&K and restoring statehood at the earliest.

RED FORT CASE: WHAT ARE THE STANDARDS FOR AWARDING DEATH SENTENCE, THE PRESIDENT'S 'MERCY' POWER

President Droupadi Murmu has rejected a mercy petition filed by Pakistani national Mohammed Arif who was sentenced to death for the December 22, 2000 terrorist attack at the Red Fort in which three people including two Army jawans were killed.

— According to Rashtrapati Bhavan, the mercy petition of Arif, received on May 15, was turned down on May 27.

— This is the second mercy plea rejected by President Murmu after she assumed office on July 25, 2022. In April 2023, the President rejected the mercy plea of Vasant Sampat Dupare, convicted of raping and killing a four-year-old in Nagpur.

— In Arif's case, the Supreme Court had dismissed his review petition on November 3, 2022, affirming the death penalty awarded to him.

— The apex court, while upholding the death sentence, noted that there were no mitigating circumstances in his favour and that the attack posed a direct threat to the country's unity, integrity and sovereignty.

— The attack, which took place on December 22, 2000, saw intruders opening fire at the 7 Rajputana Rifles unit stationed within the Red Fort premises, resulting in the death of three Army personnel.

For Your Information:

— Under Article 72 of the Constitution, "the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence where the sentence is a sentence of death". Similarly, Article 161 confers pardoning powers on the governor, but these do not extend to death sentences.

WHEN NEHRU HEADED A NATIONAL COALITION GOVERNMENT

"In the recently concluded general elections, voters did not give the Bharatiya Janata Party a complete majority. The BJP, with its 240 Lok Sabha seats, is forming the government along with its coalition partners of the National Democratic Alliance."

— "Coalitions at the national level came to public attention in 1977 when Morarji Desai formed the first non-Congress coalition government. His government, a testament to the evolving political landscape, included ministers like Charan Singh, L K Advani, Atal Bihari Vajpayee, Biju Patnaik, Parkash Singh Badal, George Fernandes and Shanti Bhushan."

— "A coalition government involves more than one political party or individuals working together, sometimes with differing viewpoints. Looking back, we find that 1977 was not the country's first brush with a national coalition. The 1946 interim government just before Independence and the first government formed after Independence in 1947 were both coalitions."

— "The 1946 interim government was responsible for steering India to independence. Pandit Jawaharlal Nehru was at the helm of this government."

— "Nehru followed the coalition template in independent India's first council of ministers. He repeated over half of the interim government ministers and brought in new ministers such as Rajkumari Amrit Kaur (Health) and N V Gadgil (Works, Mines and Power)."

— "In his book The Government and Politics of India, Prof Morris Jones highlighted, "The chosen fortress-holders of 1947 included many with little or no connection with Congress. It was a coalition government in two senses. First and foremost, it contained a strikingly careful selection of representatives of communities and regions … Secondly, it was a policy coalition also, though not by virtue of containing a balance of opinions: on the contrary, the non-Congress opinions represented was all (with the possible exception of Ambedkar) in some sense markedly conservative."

— "The coalition government also underwent a churn. In 1948, Chetty, the first finance minister, resigned under a cloud after his ministry dropped the names of some individuals who had to be investigated by Income Tax authorities. Later, Mukherjee (1950) and Ambedkar (1951) resigned due to policy differences."

IS IT TIME FOR PROPORTIONAL REPRESENTATION?

The story so far:

The results of the Lok Sabha elections were declared last week. The ruling National Democratic Alliance (NDA) has won 293 seats with a 43.3% vote share while the Opposition bloc INDIA (including Trinamool Congress) has secured 234 seats with a 41.6% vote share. Other regional parties and independents polled around 15% but ended up with only 16 seats in total.

What is first past the post system?

We follow the First Past the Post System (FPTP) in our elections to the Lok Sabha and Legislative Assemblies. Under this system, the candidate who polls more than any other in a constituency is declared elected. This is the system that is followed for elections in democracies like the U.S., the U.K. and Canada. The primary advantage of the FPTP system is that it is simple and the most feasible method in a large country like India. Secondly, FPTP provides greater stability to the executive in our parliamentary democracy because the ruling party/coalition can enjoy a majority in the Lok Sabha/Legislative assembly without obtaining majority of the votes (more than 50%) across constituencies.

The issue with FPTP is that it may result in over or under representation of political parties when compared to their vote share. In the first three elections after independence, the Congress party won close to 75% of seats in the then Lok Sabha with a 45-47% vote share.

What is proportional representation?

The Proportional Representation (PR) system ensures representation of all parties based on their vote share. The most commonly used PR system is the 'party list PR' where voters vote for the party (and not individual candidates) and then the parties get seats in proportion to their vote share. There is usually a minimum threshold of 3-5% vote share for a party to be eligible for a seat. India is a federal country and this principle if implemented should ideally be carried out at each State/Union Territory (UT) level.

As can be seen, the PR system would have resulted in representation of parties according to their vote share. For example, in Gujarat, Madhya Pradesh and Chhattisgarh, totalling 66 seats, the NDA won 64 seats with a vote share of 62%, 60% and 53% respectively. Under the PR system, the INDIA bloc would have secured 23 seats in these States. The Biju Janata Dal (classified in 'Others') with a 42% vote share in Odisha would have secured nine seats as against no representation at present under the FPTP system. Similarly, the NDA and the All India Anna Dravida Munnetra Kazhagam (classified in 'Others') would have had representation in Tamil Nadu where the INDIA bloc secured all 39 seats with a 47% vote share under the FPTP system.

The main criticism against the PR system is that it could potentially result in instability as no party/coalition may obtain a majority to form the government in our parliamentary democracy. Further, it may result in the proliferation of political parties based on regional, caste, religious and linguistic considerations that may promote casteist or communal voting patterns. However, the second criticism is not well founded since the present FPTP system has also not inhibited the formation of parties based on caste or communal considerations. This issue can be addressed by specifying minimum threshold for votes polled in order to make a party eligible for seats in legislative houses.

In order to maintain balance between stability and proportionate representation, the system of Mixed Member Proportional Representation (MMPR) can be considered. Under this system, there is one candidate who is elected through the FPTP system from each territorial constituency. There are also additional seats that are filled based on various parties' percentage of votes.

What are international practices?

Presidential democracies like Brazil and Argentina have the party list PR system. So do parliamentary democracies like South Africa, the Netherlands, Belgium and Spain. In Germany, that follows the MMPR system, out of the 598 seats in the Bundestag (their equivalent of our Lok Sabha), 299 seats (50%) are filled from constituencies under the FPTP system. The voters also provide their preference for a party in the ballots. The balance 299 seats (50%) are filled by apportioning them amongst parties, that secure at least 5% votes, based on their percentage of votes. Similarly, in New Zealand, out of the total 120 seats in the House of Representatives, 72 seats (60%) are filled through the FPTP system from territorial constituencies. The balance 48 seats (40%) are allotted to various parties, that secure at least 5% votes, based on their vote share.

This system is likely to provide the required stability in a parliamentary democracy like India while also ensuring representation for all parties based on their vote share.

What can be the way forward?

The law commission in its 170th report, 'Reform of the electoral laws' (1999), had recommended the introduction of the MMPR system on an experimental basis. It had suggested that 25% of seats may be filled through a PR system by increasing the strength of the Lok Sabha. While it had recommended to consider the entire nation as one unit for PR based on vote share, the appropriate approach would be to consider it at every State/UT level considering our federal polity. It is also pertinent to note that the delimitation exercise for increasing the number of seats is due based on the first Census to be conducted after 2026. The population explosion that happened in our country during the last five decades has been uneven among various regions. Determining the number of seats in Lok Sabha solely in proportion to population may go against the federal principles of our country and may lead to a feeling of disenchantment in the States that stand to lose through such representation.

However, in the event of increasing the seats during the delimitation exercise, the MMPR system may be considered for incremental seats or at least 25% of the total seats to be filled from each State/UT. This could assuage the apprehension of southern, northeastern and smaller States in the northern region by limiting the domination of larger States with increased seats solely through the FPTP system.

WHAT ARE THE POWERS OF THE SPEAKER AND WHY IS THE POST CRUCIAL FOR BJP AND ITS ALLIES?

As the 18th Lok Sabha prepares to meet, the TDP and JD(U), key allies of the BJP in the National Democratic Alliance (NDA), are said to be jockeying for the post of Speaker. After a pro tem or temporary Speaker administers the oath to new members, the Speaker is chosen to be the Presiding Officer of the House.

What are the powers of the Speaker and why is the post crucial for the BJP, its allies, as well as the opposition?

Constitutional mandate

The Speaker has a key role in parliamentary democracy. The Constitution of India provides for the offices of the Speaker and Deputy Speaker who, according to Article 93, are to be elected "as soon as may be" after the commencement of the House.

The Speaker is elected by a simple majority in the House. The term ends with the dissolution of the House, unless the Speaker resigns or is removed from office before that. A motion of no-confidence can be moved against the Speaker with notice of 14 days as per Article 94 of the Constitution. Separately, the Speaker, like any other member of the House, can face disqualification.

Powers of the Speaker

There are no specific qualifications for becoming Speaker, which means any member is entitled to be considered. However, the post of Speaker is distinct from other members in the House.

From the placement of the Speaker's chair in the House to his having a casting vote, from effectively being in charge of the functioning of the House to having crucial constitutional functions in dealing with disqualification of members — the Speaker is evidently perched as the Presiding Officer of Lok Sabha.

The salary of the Speaker is drawn from the Consolidated Fund of India unlike for other MPs, which flow from a statute voted on by the House itself.

Powers of the Speaker

CONDUCTING THE HOUSE: The Speaker, with a vantage view of the House, decides how it is conducted. The conduct of government business is decided by the Speaker in consultation with the Leader of the House. Prior permission of the Speaker is required for members to ask a question, or to discuss any matter

There are Rules and Procedure for the functioning of the House, but the Speaker has vast powers in ensuring these Rules are followed, and in choosing procedures. This makes the impartiality of the Speaker a crucial check and balance for the Opposition to have its say in the House.

QUESTIONS & RECORDS: The Speaker decides the admissibility of a question raised by a member, as well as how the proceedings of the House are published. The Speaker has the power to expunge, in full or in part, remarks that she may consider to be unparliamentary. Critical remarks against the ruling party may not be published if the Speaker decides to expunge them.

VOICE VOTES, DIVISION: When the treasury benches seem thin in the House, the Speaker can disregard a request for division and push a Bill through by voice vote.

As per the Rules of Procedure and Conduct of Business in Lok Sabha, if the Speaker is of the opinion that is "unnecessarily claimed", simply ask the members who are for 'Aye' and those for 'No' respectively to rise in their places and decide.

In such a case, the names of the voters shall not be recorded. Vote by division is important as a record for posterity. An MP gets a chance to record dissent and show the mandate of her constituents.

NO-CONFIDENCE MOTION: One of the most important times when a Speaker's impartiality impacts the Opposition is when a motion of no-confidence is moved against the government. In 2018, when the YSRCP and TDP gave notices for a motion of no-confidence, then Speaker Sumitra Mahajan adjourned the House several times before admitting the motion and putting it to vote.

CASTING VOTE: Although it is rare that a Speaker is required to give her casting vote, it is a crucial function. According to Article 100 of the Constitution, which talks about voting in the Houses, the Chairman of Rajya Sabha or Speaker of Lok Sabha, or any person acting as such, "shall not vote in the first instance, but shall have an exercise a casting vote in the case of any equality of votes".

Conventionally, the Speaker votes in favour of the government.

Disqualification of members

For the Opposition, the realities of the power of the Speaker under the Tenth Schedule of the Constitution are perhaps more significant than how the House is conducted.

The Tenth Schedule or the anti-defection law, introduced to the Constitution through the Fifty-Second (Amendment) Act, 1985, gives the Speaker of the House the power to disqualify legislators who 'defect' from a party. In the landmark case Kihoto Hollohan versus Zachillhu in 1992, the Supreme Court upheld the power vested in the Speaker and said that only the final order of the Speaker will be subject to judicial review.

Defections can alter numbers in the House and cause a government to fall. If the Speaker acts in a timely manner and disqualifies such members, then the new government may not have a majority. However, a delay in deciding the disqualification petitions can vitiate the Tenth Schedule.

In 2023, the Supreme Court had directed the Maharashtra Assembly Speaker Rahul Narwekar to initiate disqualification proceedings against MLAs of the Uddhav Thackeray and Eknath Shinde factions of the Shiv Sena at the earliest. At that time, the petitions were pending for over a year and a half, allowing the Uddhav-led government to collapse.

In 2020, the Supreme Court had ruled that Speakers of Assemblies and Lok Sabha must decide disqualification pleas within three months except in extraordinary circumstances.

IN LWE AFFECTED SEATS AND IN BIHAR, NOTA STILL MATTERS

While the share of voters who pressed the None of the Above (NOTA) button has continued to decline in the Lok Sabha elections, the option is still relevant in some seats. In 2014 and 2019, a significant share of voters in some select seats, particularly those impacted by Left-Wing Extremism (LWE), and many constituencies in Bihar exercised this option. This trend continued in 2024 as well.

In the 2024 Lok Sabha elections, an unusually high share of votes (14%) were polled for NOTA in the Indore seat. The Congress urged the voters to choose the option after its candidate, Akshay Kanti Bam, withdrew his nomination and joined the Bharatiya Janata Party (BJP) in the last minute. In November 2022, in the Andheri East Assembly by-poll in Maharashtra, the Shiv Sena (Uddhav Balasaheb Thackeray) candidate, Rutuja Ramesh Latke, won comfortably after the BJP candidate withdrew from the contest. NOTA received the second highest share of votes (14.8%).

The remarkable results in Indore in 2024 and the Maharashtra by-poll in 2022 show that NOTA continues to serve a purpose. A significant share of voters use it from time to time to reject all the candidates in the fray. However, in the following analysis, we have treated the Indore result as an outlier and excluded it.

The NOTA vote share across India dropped below the 1% mark in 2024 for the first time since 2014 (when NOTA was introduced for the Lok Sabha polls). In the 2024 Lok Sabha polls, 0.99% of voters opted for NOTA.

That said, a constituency-level analysis of NOTA vote share shows an interesting pattern. Chart 2 shows the share of voters in each seat who chose the option in the 2014, 2019, and 2024 Lok Sabha polls. Each circle corresponds to a parliamentary seat. Only those seats in which the NOTA vote share crossed the 3% mark have been depicted.

The Bastar constituency in Chhattisgarh, and Koraput and Nabarangpur, which are both in Odisha, featured in all the three years. Aruku in Andhra Pradesh featured in 2019 and 2024. The common thread linking these seats is that they are all impacted by LWE. This trend of the NOTA share being high in LWE-affected districts has been recorded in several Assembly elections as well.

Another trend that can be observed is that there is a relatively high number of seats in Bihar in which the NOTA vote share crossed the 3% mark both in 2019 and 2024. In 2019, the NOTA vote share was more than 3% in 11 seats in Bihar, while in 2024, this was the case in four seats. While some of this can be explained as an impact of LWE, many seats in the State which are not affected by extremism also feature on the list. Close to 4% of the voters in 2024 and 5% in 2019 chose NOTA in the Gopalganj seat in Bihar.

Dahod in Gujarat, where more than 3% of the voters chose NOTA in the 2014, 2019, and 2024 Lok Sabha elections, is the only seat outside Bihar to have consistently recorded such a high share. It is also not part of the districts affected by LWE.

Clearly, most of the seats in Bihar stand out. Notably, while there was a significant decline in the NOTA vote share in seats such as Paschim Champaran, Saran, Nawada, and Jahanabad in Bihar in 2024 compared with 2019, in other seats in the State such as Banka and Jhanjharpur, the NOTA vote share increased significantly.

FOR PLURALITY

A drop in satisfaction levels with governance, the stagnating popularity of Prime Minister Narendra Modi, the resilience of regional parties and the rejuvenation of the Congress party, and the fading of Hindutva for marginalised sections in the Hindi heartland. All these contributed to the National Democratic Alliance's reduced majority in the 2024 general election, according to the CSDS-Lokniti's post-poll survey. In its pre-poll survey, the agency had indicated that "unemployment" and "price rise" were key issues for a majority of the electorate and despite the healthy 46% support for the NDA, a chunk of those favouring the incumbents were willing to back the Opposition during the course of the election. The final vote share for the NDA, at 43.6%, was 1.4 points lower than what the constituents of this year's coalition received in 2019 even as the INDIA bloc secured a significant 41.4% support (if the Trinamool Congress's shares are included), a leap from 2019. In the previous Lok Sabha election, the Balakot action, the PM-Kisan scheme and 10% reservation for the Economically Weaker Sections category had helped the Bharatiya Janata Party romp home with 303 seats, according to Lokniti. But this time around, multiple narratives and political issues tied the party down in its strongholds. Even its ascendance in Odisha and Telangana was not enough to recoup its losses in the Hindi heartland.

The strong support by Dalits, other OBCs and minorities to the Congress in States such as Uttar Pradesh, and the Samajwadi Party's terming the BJP's agenda as a threat to the Constitution put the wind in the Opposition's sails. That Congress leader Rahul Gandhi enjoyed a four-point lead (36% versus 32%) over Mr. Modi among respondents in Uttar Pradesh, when asked about their preference for the Prime Minister's post, must alarm the BJP. Clearly, the party can no longer expect to rely on Hindutva as a cementing factor except in States such as Uttarakhand, Gujarat, Madhya Pradesh and Chhattisgarh, which are distinguished by a lack of a diligent Opposition. For the INDIA bloc, and the Congress in particular, its credible performance notwithstanding, its task is cut out in these States. The Congress also increased its vote share in Karnataka from what it was in the 2023 Assembly elections, but the NDA's strong social coalition proved a hindrance in converting those increased votes into more seats. The message for the Opposition is clear — wherever it is in power, it must strive to provide a clear alternative to the NDA in terms of governance. And where it is not in power, it must rely on building unity among like-minded forces and a narrative of bringing change through alternative policies that offer a strong contrast to the centralising and unitary nature of the BJP.

SINGULAR FOCUS

The portfolios of many of the newly sworn-in Ministers of the 18th Lok Sabha signal no significant changes from what they held in the previous regime. The Bharatiya Janata Party continues to retain the 'major' portfolios, from Home to Telecommunications, with the rest distributed among its coalition allies. The 18th Lok Sabha also includes five Ministers of State with independent charge. One of them is Jitendra Singh, whose portfolio spans the Departments of Space (DoS) and Atomic Energy (DAE), the Ministries of Earth Sciences (MoES), Science and Technology (MST), and Personnel, Public Grievances and Pensions. Each of these ministries or departments by itself is a handful these days. The DoS is grappling with the entry of private sector players in the national space programme as well as managing the development of the maiden human spaceflight mission and new launch vehicles. The MoES is involved in missions to explore the seabed for mineral resources — an enterprise just beginning to feature in multilateral fora — as well as climate adaptation and mitigation. The MST oversees India's three foremost research departments at a time when the world is haring to test artificial intelligence, build quantum computers, develop and

deploy multi-omics approaches in sectors from agriculture to medicine, and invent advanced energy storage solutions. The DAE has announced plans to rapidly advance nuclear power, which includes starting phase two of its reactors programme and commissioning one facility every year. Just the sheer amount of technical divergence in the offing here, and their evolving interactions with society at large, merits more than a shared Minister of State.

The fields these bodies oversee also suffer many persistent problems. To pick a few: the timelines of fellowship and grant disbursals for young researchers are often farcical; facilities that can support interdisciplinary research are largely localised and inimical to collaboration; cutting-edge research is hamstrung by vacillating regulations; intellectual property rights protection is less than airtight, and translational research is bare and restricted to some sectors. Importantly, the gross domestic expenditure on research and development as a fraction of GDP has been declining since 2008-09. While demands for more money should be preceded by capacity building that can productively absorb these funds, the growth of that capacity has been in fits and starts. Among other things, India sorely needs a separate Minister, ideally of Cabinet rank, for each of its major nodal research bodies to escape their long-standing rut, and have their needs met and problems solved in meaningful fashion during the bumpy rule of a coalition government.

LOK SABHA HAS LOWEST SHARE OF MUSLIM MPS IN SIX DECADES

The 18th Lok Sabha has the lowest share of Muslim MPs in six decades. Despite Muslims forming over 15% of the country's population, only 4.4% of MPs (or 24 MPs) are from the community. Notably, this is a record low despite the fact that there is a considerable spike in the share of Muslim MPs from the Congress, the second-largest party in the current Lok Sabha.

Slump, rise, and slump

The party with the most members, the Bharatiya Janata Party (BJP), has no representatives from the Muslim community at present. In fact, the decline in the share of the Muslim MPs in the Lok Sabha in the 1990s coincided with the rise of the BJP. The party's total MP tally crossed the 100th mark for the first time in the 10th Lok Sabha (1991-96).

Before the slump in the 1990s, the share of Muslims in the Lok Sabha peaked at 8.3% in the 1980s — that is in the 7th (1980-84) and 8th (1984-89) Lok Sabhas — when the Congress was in power. Following the slump in the 1990s, the share of Muslim MPs again increased incrementally and grew close to 7% in the 14th Lok Sabha (United Progressive Alliance or UPA 1: 2004-09), coinciding with the dip in the BJP's MP count in the 2000s. In the latest four Lok Sabhas (UPA 2: 4.8%, National Democratic Alliance or NDA 1: 4.7%, NDA 2: 5%, and NDA 3: 4.4%), the share of Muslim MPs declined to 5% or lower, similar to the proportion recorded in the 1990s.

At present, with seven Muslim MPs, the Congress is on the top of the party-wise list. This translates to 7% of the total Congress MPs. This is the first time since the 8th Lok Sabha (1984-89) that the share of Muslim MPs in the Congress has crossed the 7% mark. The share of Muslim MPs in the Congress peaked at around 7.5% in the 6th, 7th, and 8th Lok Sabhas (1977-89). Then the share sharply and consistently declined to reach 1.1% in the 17th Lok Sabha (2019-2024). It has increased again in the latest term.

While the Congress has the highest share, the All India Trinamool Congress (AITC) with 5 Muslim MPs and the Samajwadi Party (SP) with 4 Muslim MPs are second and third in the list of the top five parties with the highest number of Muslim MPs. Eleven percent of the SP's MPs are Muslim

and 17% of the AITC's MPs are Muslim. The other Muslim MPs are from the Indian Union Muslim League (3), the Jammu and Kashmir National Congress (2), and the All India Majlis-E-Ittehadul Muslimeen (1). There are also two independents who are Muslim.

The story of two States

The record low share in the latest Lok Sabha was mostly due to steep declines in the share of Muslim MPs in Assam and Kerala. In Assam, the share declined from 14% to 7%. In Kerala, it reduced from 19% to 15%. Even in Uttar Pradesh, despite the INDIA alliance winning a majority of seats in 2024, the State recorded a slight decline in the share of Muslim MPs from 8% in the previous Lok Sabha to 6% in 2024.

Only 10 States and UTs have at least one Muslim MP in the Lok Sabha in the current term.

HIGH EXPECTATIONS

With Telugu Desam Party leader Nara Chandrababu Naidu having taken oath as Andhra Pradesh's Chief Minister for a record fourth time, the expectation is that this will bring to an end the vacillations over several policy decisions that have plagued the State and its economy. The grand ceremony saw Prime Minister Narendra Modi and several National Democratic Alliance partners in attendance. As anticipated, top priority has been accorded to Mr. Naidu's unfinished dream — a world-class capital at Amaravati, nestled between two of Andhra's biggest cities, Guntur and Vijayawada, and on the banks of the Krishna. Mr. Naidu has already indicated that he would revitalise this project that was stalled by his predecessor, Y.S. Jagan Mohan Reddy. It would be imperative, however, to enact a law on the capital region to settle the matter, as flip flops over a capital for a large State such as Andhra Pradesh have been to the detriment of governance, the economy and businesses, and a psychological dampener for a people already reeling from the loss of Hyderabad. The Chief Minister must also address environmental concerns for the Krishna due to the impending and rapid urbanisation.

Mr. Naidu is viewed as a pro-corporate urbaniser, focusing on building cities and largely neglecting agriculture and allied sectors. While he has been rightly credited for Hyderabad's emergence as an IT power centre, he must now make good his promise to Andhra's farmers to lift them out of stagnation and poverty. Indeed, complimenting the "super six" promises in the manifesto of the NDA alliance in the State was an annual ₹20,000 input cost for the farmer. But Andhra's agriculture sector, much like the rest of the country, requires a systemic approach to increasing farmers' incomes, generating sustainable livelihoods, reducing food waste by expanding cold storage supply chain facilities, and increasing output efficiency by implementing climate-smart farming practices. As a futuristic leader, one would hope Mr. Naidu would take these cues. But the most pressing concern, of creating jobs, while continuing the unemployment allowance and other welfare measures begun by his predecessor, must be his top priority. Only this will inspire faith in his government and his governance.

ON SPECIAL CATEGORY STATUS FOR ANDHRA

The story so far:

The Andhra Pradesh Reorganisation Act, 2014, which bifurcated unified Andhra Pradesh into two States, was notified on March 1, 2014 and had come into force from June 2, 2014. While the Act had specified many things, there was no mention of giving a Special Category Status (SCS) to

Andhra Pradesh. Now with the completion of the 2024 Lok Sabha elections, the demand for SCS to Andhra is again gaining attention.

What is the history?

Shortly after the reorganisation, in a debate in the Rajya Sabha on February 20, 2014, the then Prime Minister Manmohan Singh had said that "SCS would be extended to the State of Andhra Pradesh for a period of five years". This was appreciated and seconded by Bharatiya Janata Party (BJP) leader M. Venkaiah Naidu.

But after Prime Minister Narendra Modi took over the reigns of the National Democratic Alliance (NDA)-led Union Government, the SCS was put on the back burner. When it was raised in both Houses by the Telugu Desam Party (TDP) and opposition MPs, it was said that Andhra Pradesh does not qualify for the SCS, firstly as per norms and secondly due to the dissolution of the Planning Commission in August 2014. The 14th Finance Commission had equated SCS with the general category status and had annulled SCS for new States.

Why does AP not qualify for the SCS?

The concept of SCS was first brought into existence through the recommendations made by the Fifth Finance Commission in 1969. It was done to benefit a few States through special grants from the Centre. The focus was on States that had socio-economic issues and geographical disadvantages, such as hilly States.

Five factors stood as the qualifying benchmark for the granting of SCS — States that comprise a majority tribal population, low density of population, hilly States and close to international borders, States that have socio-economic and industrial backwardness, and lack of adequate State finances. At present, the States that have the SCS include Arunachal Pradesh, Assam, Himachal Pradesh, Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, and Uttarakhand.

It was debated that Andhra Pradesh, based on the above strictures, does not qualify for the SCS and that the Finance Commission had already annulled it. However, the Centre offered Andhra Pradesh a special package (SP).

What did the special package entail?

Having been convinced that the SCS was ruled out by the Union Government, the first Chief Minister of residual Andhra Pradesh (2014- 2019), Chandrababu Naidu of the TDP, who was then part of the NDA alliance, agreed for the SP. The SP included the recognition of the Polavaram irrigation project as a national project with full funding from the Union Government, tax concessions and special assistance. Though Mr. Naidu accepted the SP, it was termed as a betrayal by the Opposition parties, including the Yuvajana Sramika Rythu Congress Party (YSRCP).

In 2018, Mr. Naidu walked out of the alliance and also moved a no-confidence motion which failed. Political analysts say that Mr. Naidu had succumbed to pressure from the opposition, who were building up a strong campaign against the TDP, based on the SCS issue. His volte-face from SCS to SP was being publicised as a 'betrayal of the State'.

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Does Andhra still qualify for SCS?

N.K. Singh, Chairman of the 15th Finance Commission, in his book Portraits of Power, stated that the 14th Finance Commission had never said that SCS cannot be given and that it was up to the Union Government to take a call.

The 14th Finance Commission instead of SCS had increased tax devolution to the State to 42% and also introduced revenue deficit grants for States facing a revenue gap, which Andhra had already received.

SCS, which has an arrangement of funding States in a ratio of 90:10 (90% the Centre and 10% the State), may not be a ruled out chapter for Andhra Pradesh. The Union Government can take a call and refer it to the 16th Finance Commission and the NITI Aayog, and can get back to the arrangement.

Why is SCS in the limelight again?

Ever since the bifurcation of the State, it has been facing a revenue deficit. Additionally, the debts of the State have shot up enormously. Most of its projects and development have come to a standstill and on top of that the building for a new greenfield capital at Amaravati is pending and needs funding.

People are hopeful that since the TDP is again part of the NDA alliance which does not have a clear majority in the Centre, and is dependent on the MPs from Andhra Pradesh, it would be the right time to press for the SCS, for the overall development of the State.

BIHAR'S CALL FOR SPECIAL CATEGORY STATUS

The story so far:

Bihar Chief Minister Nitish Kumar has reiterated the State's long-standing demand to be granted the special category status by the Centre, a move that would increase the amount of tax revenues that the State gets from the Centre. The demand for special category status right now is significant because Prime Minister Narendra Modi's Bharatiya Janata Party (BJP) depends on support from Mr. Kumar's Janata Dal (United), which has 12 seats in the new Lok Sabha, to hold on to power at the Centre. Notably, the Bihar Cabinet had passed a resolution late last year demanding special category status to the State.

What is the special category status?

The special category status was introduced in 1969 based on the recommendations of the Fifth Finance Commission. The intent was to help States that are disadvantaged in terms of their geographic, social or economic status to improve their position on par with other, more developed Indian States.

Criteria such as having a hilly terrain and a sizable tribal population can entitle a State to be granted the special category status. A State that is granted the special category status would be able to claim more funds from the Centre than otherwise and can also enjoy various tax-related concessions.

For example, a State with special category status would receive 90% of funds from the Centre when it comes to schemes sponsored by the Union government, as against other States which receive only around 60% to 80% of funds from the Centre.

Initially, Jammu & Kashmir, Assam and Nagaland were granted the special category status to aid their economic development. Subsequently, eight other States including Himachal Pradesh and Uttarakhand were granted the special status. Thus, 11 out of 28 States, or more than a third of Indian States, already enjoy the special category status.

Why is Bihar demanding the special category status?

Bihar's politicians, including its current Chief Minister, have for a long time demanded special category status for the State pointing to its economic backwardness. Bihar's per capita income of around ₹60,000 is among the lowest in the country and the State lags behind the national average in several human development indicators as well.

Bihar has also noted that the State's fiscal situation has been adversely affected by the bifurcation of the State that caused industries to move to Jharkhand, lack of sufficient water resources for irrigation, and frequent natural disasters.

The most recent Bihar caste based survey of 2022 indicates that nearly a third of the State's people live under the poverty line.

Union governments headed by both the BJP and the Congress, however, have been unwilling to grant any special status to Bihar and several other States due to the increased burden it would put on the Centre's finances.

Particularly, it has been noted that there is now greater devolution of taxes to the States from 32% of the total divisible pool to 42% based on the recommendation of the Fourteenth Finance Commission. Hence, the demand for special category status from Bihar is simply seen as a ploy by State governments to demand even more funds from the Centre.

The Centre may also fear that granting the special category status to certain States will encourage others to demand the same from the Centre. It should also be noted that political considerations play a large role in the granting of special status to States. States with better political bargaining power with the Centre may manage to receive more funds either through a special status or by other means.

Further, there is the risk that political parties vying for power at the Centre may compete to either gain or stay in power by promising to grant special status to certain States.

The Congress party, for instance, in its 2024 election manifesto promised to grant the special category status to Bihar if it comes to power. Such competitive populism can lead to a worsening of the Centre's finances.

Does Bihar need the special category status?

Politicians at the State level generally have an incentive to compete for funds from the Centre as this would allow them to spend more. So it is not surprising that not just Bihar but many other States too, including Andhra Pradesh which is now ruled by the BJP's ally Telugu Desam Party and Odisha which is prone to floods and has a significant tribal population, have demanded the special category status that would entitle them to more funds from the Centre's treasury.

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In fact, TDP leader N. Chandrababu Naidu pulled his party out of the National Democratic Alliance government before the 2019 general election over the issue of granting special category status to the State.

Mr. Naidu wanted special status to compensate for the decrease in tax revenues as a result of his State's loss of Hyderabad to Telangana.

Bihar's economic backwardness has been cited as the primary reason for the need for the granting of the special category status to the State.

Many analysts say this demand based on economic backwardness is very well justified as they believe that the State government will have to spend on welfare projects to uplift the poor and to invest in boosting the State's infrastructure. The Bihar government last year estimated that the granting of the special category status will help the State receive an additional 2.5 lakh crore rupees over five years to spend on the welfare of 94 lakh crore poor families.

Others, however, do not believe that Bihar's economic backwardness justifies greater allocation of Central funds to the State. They see the increased allocation of funds to poorer States as incentivising their bad policies and penalising more developed States which have adopted better policies.

Historically, States like Bihar and Uttar Pradesh suffered slow growth and high poverty levels due to poor rule of law that discouraged investments considered crucial to boosting growth.

But now, as one of the fastest growing States in the country, albeit from a lower base, Bihar has managed to increase its per capita income level and also the size of its overall economy at a brisk pace in recent years.

In 2022-23, for instance, Bihar's gross domestic product grew at 10.6% as against the national average of 7.2% while its per capita income level in real terms grew by 9.4% in the previous year. So, these analysts believe, Bihar does not need more fiscal help from the Centre but a stronger rule of law to further improve its economy.

In other words, while more funds from the Centre might offer Bihar some short-term relief, its long-term economic prospects will depend on the State's ability to further strengthen rule of law.

CARRY IT FORWARD

Odisha's newly sworn-in Chief Minister Mohan Charan Majhi, the first politician from the Bharatiya Janata Party (BJP) to occupy the post in the State, will also be making a new record while thwarting a long-standing one. His predecessor, Naveen Patnaik of the Biju Janata Dal, was the Chief Minister for 24 years and 99 days – the second longest tenure for any one in India, after Pawan Kumar Chamling who served 66 days longer in Sikkim. Mr. Majhi is from the Santali tribe and his ascension shows the assiduousness with which the BJP has sought to win the support of the tribal communities in central and east India — also reflected in its endorsement of President Droupadi Murmu when she stood as a candidate. Mr. Majhi has rich experience as a legislator and a political organiser, having begun his political journey as an administrator. He was a village sarpanch in the late 1990s. His ascension marks a breakthrough for the BJP, which successfully projected the image of the BJD being rudderless without Mr. Patnaik as well as his dependence on the bureaucracy having steadily eroded the BJD of its second-rung of leadership. As the Achilles heel of the BJD too, this bureaucratic over-dependence was used to not only provide governance

and implement policies endorsed by Mr. Patnaik, but also in political outreach. The BJP has steadfastly grown as the alternative to the BJD with the decline of the Congress.

Mr. Majhi's swearing-in ceremony also marked a return to a degree of political bonhomie with the BJD after a bitter and personal campaign targeting Mr. Patnaik's lieutenant, V.K. Pandian, for his Tamil roots. The optics were encouraging and the BJP should focus on bringing continuity to some of the BJD's initiatives in the State that have allowed for faster GDP growth, better delivery of services and welfare measures in the rural areas, and better diversification of an economy that is dependent on agriculture. Yet, for all its successes in reducing poverty and diversifying its economy, Odisha still remains among the poorest States in the country, with an estimated 11.07% of its population below the Multidimensional Poverty Index in 2023, according to NITI-Aayog and only six major States having higher numbers. Mr. Majhi and his colleagues have their task cut out. Odisha rewarded Mr. Patnaik with a long tenure not just for governance but also for bringing peace to a State that has seen communal riots in its tribal regions at a time when his party was in alliance with the BJP. The BJP should not interpret this mandate as one that endorses its ideology of Hindutva and return to those days of communal disharmony. Instead, it must focus on continuing the developmental work in Odisha.

REMEMBER MANIPUR

In the year since ethnic violence ruptured Manipur, killing over 200 people and displacing over 60,000, both the Centre and the state administrations have repeatedly laid the blame on outsiders — "illegal" migrants from Myanmar, with whom the Kuki-Zos in the state's hilly region share a common ethnicity — holding them responsible for the disruption as well as the state's illicit drug trade. Now, in his first interview after the Lok Sabha elections to this paper, the admission of Chief Minister N Biren Singh of his government's failure to contain the unrest comes as a welcome, though belated, acknowledgement of responsibility. With fresh violence in Jiribam and an attack on Singh's advance convoy to the district, it is imperative that the government begins at the earliest the long overdue work of healing.

The recurring pattern of violence is symptomatic of the state's complex history in which identity is only one part of the story. With its mixed population of Meiteis, Kuki-Zos, Bengalis, Muslims and Nagas, Jiribam, to the west of Manipur and bordering Assam's Cachar district, for instance, was one of the few places to have been insulated from the unrest in the state. That changed last week following a murder. The conflagration may also reflect other insecurities. Manipur has the third lowest per capita income in the country, down from the highest among northeastern states in the 1990s. The state ranks low on most indices, from education and employment opportunities to infrastructure building and healthcare facilities. The resultant anxieties exacerbate ethnic tensions and accusations of partisanship in resource allocation and administration.

In the interview, Singh owned up to the erosion of confidence that led to his party, the BJP, losing both the Lok Sabha seats in the state. BJP's vote share in the state dropped from 34 per cent in 2019 to 17 per cent in 2024. A solution to Manipur's violence, Singh said, would require the intervention of the Centre to help "... convince the original tribal people that the (state) government is not against them, but is targeting outsiders who came after 1961". It is, of course, true that greater initiative by the Centre and the state is imperative to bring about a mediated solution — so far a failure despite the formation of a multi-ethnic peace committee in June 2023. For a PM who has visited the Northeast more than most of his predecessors, his absence from Manipur since the violence began has been glaring. It also cannot be overstated — as RSS chief Mohan Bhagwat noted at an event in Nagpur on Monday — that the work of restoring peace

should have been a priority much earlier. While narcoterrorism, poppy cultivation and illegal migration are all parts of the problem, it is essential that the CM, a Meitei, moves beyond the insider-outsider rhetoric. Manipur's road to rehabilitation lies not in myopic lip service, or a narrow law-and-order approach, but in a genuine willingness to substitute identity politics for equitable and inclusive governance.

THE VADODARA TEST: WHEN PREJUDICE THREATENS A MUSLIM HOMEOWNER'S RIGHTS

For most Indian families, a home of their own is a dream of a lifetime. It comes with a promise of security and belonging, an offer of a sense of community. Not so, it turned out, for the 44-year-old Muslim woman employee of the Ministry of Entrepreneurship and Skill Development who was allotted an apartment in the Vadodara Municipal Corporation's (VMC) low-income group housing complex at Harni under the Mukhyamantri Awas Yojana in 2017, whose dream was to bring up her son in an inclusive neighbourhood. The allotment has been met with complaints and demands to revoke it to government authorities from 33 residents of Motnath Residency Cooperative Housing Services Society Limited on the ground of her religion and possibilities of "threat and nuisance". This display of extreme prejudice may not be an aberration in urban centres such as Vadodara or Ahmedabad, but a government scheme cannot pander to it, or be affected or circumscribed by it. The VMC must, in fact, read the law, and the Constitution, to it. Article 14 of the Constitution guarantees equality before the law. Article 15(1) prohibits discrimination against any citizen on the basis of religion, race, caste, sex, or place of birth.

In Gujarat, spatial segregation based on religion or community, is unfortunately not a recent or isolated phenomenon. In 1986, following communal riots, the Disturbed Areas Ordinance was introduced as a deterrent against distress sale of properties. It mandated that property deals in areas prone to violence or disturbances be approved by the district collector. In 1991, it was replaced by permanent legislation. Since then, the Disturbed Areas Act has been periodically updated with progressively stringent provisions that have served to deepen social fault lines and marginalise minorities. The result has been a hardening of stances that treat the "other" with suspicion and shrink the common ground. In Vadodara, for instance, the range of "reasons" offered to disenfranchise the Muslim woman from her apartment ranged from discomfort at living next door to a family belonging to the minority to apprehensions of law and order breakdowns because of their presence in a "Hindu" neighbourhood.

VMC officials have pointed to the impartiality of the process, but it is not enough to suggest that the matter be settled in court. When personal prejudice threatens to corrode constitutional rights, it is for all concerned authorities — and the state — to come forward and protect them. This, then, is a test: To defend the equal rights of every citizen, without fear, favour or prejudice.

WHO ARE THE SATNAMIS, THE DALIT RELIGIOUS COMMUNITY WITH A HISTORY OF PROTESTS

Members of the Satnami religious sect set fire to the office of the Superintendent of Police and pelted the office of the District Collector with stones in Baloda Bazar in central Chhattisgarh on Monday after alleged inaction over the desecration of a religious site at Amar Cave in the district.

— Members of the mostly Scheduled Caste Satnami Samaj or Satnam Panth live mainly in Chhattisgarh and contiguous areas of Madhya Pradesh.

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— The desecrated shrine, known as Jaitkham, is located about 5 km from Giraud village in Baloda Bazar district, at the birthplace of Guru Ghasidas, an 18th century saint to whom the Chhattisgarh Satnamis trace their theological lineage.

— In 1657, a mendicant named Birbhan, who was inspired by the teachings of Kabir, founded a Satnami community in Narnaul in present-day Haryana.

— "Ritual and superstition were condemned, and allegiance was explicitly rendered to Kabir... Caste distinctions within the community of believers were forbidden... An attitude of sympathy with the poor and hostility towards authority and wealth is apparent [in Satnami preachings]," Irfan Habib wrote in his classic 1963 work.

— Initially, most Satnamis belonged to an "untouchable" caste engaged in leatherwork. The community has, however, moved away from the profession over time.

— In 1672, Satnamis living in present-day Punjab and Haryana rose in revolt against Aurangzeb's ever-increasing tax demands.

— Aurangzeb all but wiped out the community, which would see a revival only in the mid-eighteenth century — in present-day Uttar Pradesh under Jagjivandas, and in present-day Chhattisgarh under Ghasidas.

— At the time of Ghasidas' death, his following was estimated to be nearly a quarter million strong, belonging almost entirely to a particular Scheduled Caste.

— Over the years, many Satnamis adopted caste-Hindu practices, beliefs and rituals, and came to see themselves as part of the Hindu religious mainstream.

— Satnamis are now an increasingly assertive political force. Satnami leaders enjoy clout over not just members of the sect, but also over the rest of Chhattisgarh's 13% SC population.

— The sect has been historically associated with the Congress, but since 2013, some Satnami gurus have shifted allegiance multiple times.

For Your Information:

— They were part of around 7,000 members of the Satnami Samaj, who had gone to Baloda Bazar from different parts of Chhattisgarh to protest the desecration of a Jaitkham – a structure that holds religious significance for the Satnam Panth sect – located in Amar Cave, around five kilometres from Giraudpuri village in Baloda Bazar district. The desecration had taken place on the night of May 16-17.

FACTS IN FICTION

The likelihood of protests, communal tension or prejudice to law and order ought not to be cited as a reason to suspend the screening of a film. The Karnataka government's decision to stop the release of the Hindi film, Hamare Baarah, for two weeks violates the freedom of expression in the name of upholding order and preventing communal tension. Such a ban on public screening of films, independent of their merit, has no place in a democratic society. The Bombay High Court, which initially stayed the release of Hamare Baarah, has lifted the ban, following the producer's offer to remove some controversial dialogues. Its observation that allowing an individual to stall the release of a certified film would encourage film producers being held to ransom is consistent

with judicial precedents. Once it is certified by the Central Board of Film Certification, presumably after proper scrutiny of its suitability for public viewing, there ought to be no scope for a second opinion by a law enforcement authority. The position that a work, be it a book or a play or a film, may be proscribed under threat of protests or likely violence has been rebuffed by the Supreme Court of India in some landmark verdicts. "... freedom of expression cannot be suppressed on account of threat of demonstration and processions or threats of violence," the Court said in its 1989 judgment in S. Rangarajan vs P. Jagjivan Ram on the film, Ore Oru Gramathile.

The emphasis on freedom of expression does not mean that one should endorse any film whose content is distasteful or obnoxious or contains vile propaganda. As for the film now under the scanner, there is reason to believe that such criticism is justified, beginning with the overt communal overtones in its title itself. Its posters and synopsis suggest that the film draws upon sectarian allegations that the Muslim community is responsible for population growth and that its men force women to bear many children, in utter disregard of their health and well-being. The film's proponents may claim it is about spreading awareness on population control, and that watching the film may dispel such an impression. However, it cannot be denied that contemporary film-making has made stereotyping the Muslim community a significant trend. Any film that gives prominence to the claim that members of the community have more children, must be aimed at pandering to communal sections and the political establishment that encourages them. If the country is to be a free and open society, there is no need to suppress any point of view. At the same time, it must also develop the wherewithal to counter sectarian propaganda with facts and without resort to unconstitutional methods.

A NEET MESS

In the little over a decade that NEET has been implemented in India, it has gathered as much notoriety as a static stone accumulates moss. In the latest round, the National Testing Agency, which conducts NEET, has been forced to appoint a four-member committee to go into the charges and allegations made about the conduct of the eligibility and entrance test for medicine for 2024. About 1,500 students from six centres complained that they were not given the full time for completing the exam, because of various reasons: distribution of the wrong question paper, torn OMR sheets, technical glitches, and delay in distribution of the OMR sheets. The court allowed granting grace marks to those who were affected. After publication of results, it was noted that some students scored 718/719 out of 720, impossible with the existing evaluation pattern. It was also charged that an unusually high number of students scored full marks. The NTA later clarified that the odd marks were a result of granting grace marks as mandated by the court, and that in general it was an easy paper, so many students had scored full marks. But that was not all; there were reports of the NEET UG question paper being leaked before the exam. Inaccuracies were reportedly found in the NTA NEET UG official answer keys, and there were charges of inconsistent evaluation of the UG papers. Political parties have called for a thorough, competent third-party probe into the charges, and groups of students have also demanded a retest. Every year, there are charges of poorly managed exam centres, and absurd high-handedness over what the candidates are allowed to wear. Cheating scams where candidates have sent in proxies to write the exam in their stead, have been exposed.

Arguably one of the biggest entrance examinations conducted annually, with nearly 23 lakh students taking the test, it is no surprise that NEET has had a chequered past. Experts argue that with an exam of this scale, it is impossible to be completely error-free. But, year after year, news of egregious violations during the exams hits headlines. The NTA must, with the assistance of

States, ensure that technical glitches and cheating scams, including premature release of question papers, and using proxies, do not recur. If this can be done by exercising greater rigour, and with a longer, more meticulous preparation routine, then no efforts should be spared to do so. Additionally, it should pay attention to demands that all NEET admissions come under single window counselling only; and a re-evaluation of the zero-percentile benchmark for PG admissions, besides strict regulation of fees in private medical colleges.

WHY UGC HAS ALLOWED ADMISSIONS TWICE A YEAR, WHAT COULD HAPPEN NOW

The University Grants Commission (UGC) has allowed universities to admit students twice a year — in July/ August and January/ February. The UGC has said biannual admissions will give universities the flexibility to take a decision on their admission cycles based on infrastructure and faculty available. It is not mandatory for universities to adopt the new system.

Existing process, change

Students are now admitted once a year, in a single academic session that begins in July/ August. The UGC's decision will allow universities to admit students in two cycles, in July/ August and then in January/February, to undergraduate, postgraduate and PhD programmes.

The new system could allow universities to reflect the admission cycles in some countries that admit students twice a year, and where the courses that are available in these different admission cycles may also vary. Universities in the United States, for instance, have 'intakes' in the fall (session that begins in August/ September) and in the spring (session that begins in January).

Reason and beneficiaries

The UGC has already attempted the biannual admission process for open and distance learning, and online programmes, and found that "permitting a second academic session in a year has helped nearly half a million students join their degree programmes without waiting for one full academic year".

This, according to UGC Chairman M Jagadesh Kumar, could benefit students who may have missed admissions in the July/ August session on account of health issues, delays in board exam results, or personal reasons. With admissions opening twice a year, they need not wait for an entire year before they can apply again.

Kumar has said that universities abroad follow a biannual admission system, and this system in Indian institutions "can enhance their international collaborations and student exchanges".

He has also said that this system could also help increase the 'gross enrolment ratio' (GER). For higher education, GER is the ratio of students enrolled to the population of the age group eligible for higher education.

What next for institutions

The decision to open admissions twice a year lies with the universities — their academic and executive councils will have to take the call. It will be up to the universities to work out what programmes they might open up for biannual admissions. The availability of infrastructure and faculty will be crucial in deciding to admit students in two admission cycles.

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While the UGC has allowed higher education institutions to admit students twice a year from the coming academic year, Delhi University Vice Chancellor Yogesh Singh pointed out that admissions for the upcoming session have already begun.

Chairman Kumar said: "This a provision that we are providing... It is quite possible that it will not happen immediately. The universities may have to work on their infrastructural requirements, faculty requirements, and then plan it over a period of time."

Singh said the university is open to the idea and may implement it initially for a few programmes before extending it to others.

There is also the question of admissions that are based on entrance exams. Kumar said that it could be "beneficial to students" if they are conducted twice a year.

DRYING UP: WHAT URBAN INDIA NEEDS TO FIX ITS WATER PROBLEM

Reduced river flows and falling water tables have made the summer harsher in several parts of the country. In Karnataka, the season began early, in March, when the drought, which carried over from last year, created and aggravated a water crisis in the state's capital, Bengaluru. In Delhi, the scorching temperatures have led to a similar emergency, reigniting an old dispute over water allocation to the capital. Last month, the Delhi government moved the Supreme Court, seeking an increased share of the Yamuna's waters. In response, on June 6, the Court asked Himachal Pradesh to release 137 cusecs of water. It also directed Haryana to facilitate the flow of this water to the NCR. However, Delhi government has complained that the neighbouring state is not complying with the directive, while Haryana contends that water is "getting evaporated" in transit. With the world warming up, the country needs a long-term policy to obviate such conflicts and make sure people do not suffer water shortages.

The Narendra Modi government has accorded importance to providing tap water connections, but the health of aquifers continues to be neglected. The country has historically tried to address water deficits by focusing on supply-side parameters. In line with such an approach, the Centre has asked states to prepare inventories of water bodies as a first step towards preventing the encroachment of these aquifers. Much more needs to be done to tackle long-standing shortfalls. There is very little coordination between departments that deal with surface and groundwater, irrigation resources and drinking water. The few water-sharing arrangements between riverine states come apart during shortage seasons. And plans to harvest rainwater remain largely on paper, despite floods and dry spells alternating with worrying regularity in most parts of the country.

In recent years, programmes such as the Sahi Fasal Campaign, Pradhan Mantri Krishi Sinchayee Yojana and Atal Bhujal Yojana have taken early steps to encourage efficient use of water in agriculture. Optimal use of irrigation resources is essential. However, demand-side management of water resources also requires analyses of practices at the household and industrial levels. Currently, the data on per capita water availability for different users is sketchy. Emergencies, such as the latest shortage in Delhi, usually precipitate knee-jerk responses such as imposing fines for wasting water, when the need is to incentivise water conservation, reuse, and recycling. With climate vagaries imperilling the country's already-stressed aquifers, the new government should hit the ground running.

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EXPLAINED: WHAT IS THE AGNIPATH SCHEME AND THE OPPOSITION TO IT?

The Bharatiya Janata Party-led government's ambitious Agnipath scheme has faced opposition, from political parties and Armed Forces veterans alike, since it was announced in June 2022.

In fact, a key plank in INDIA bloc's campaign in states like Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, Bihar and Rajasthan — where the Armed Forces are a sought after employer — was the opposition to this scheme for military recruitment. And the BJP's performance in these states indicates that the pitch had some resonance on the ground.

Now, with the BJP short of a majority on its own in the Lok Sabha, crucial alliance partners — Nitish Kumar's Janata Dal (United) and Chirag Paswan's Lok Janshakti Party — too have called for a review of the contentious scheme. Here is why.

What is the Agnipath scheme?

Agnipath was aimed at recruiting personnel below officer ranks — soldiers, airmen, and sailors who are not commissioned officers — to the Indian Armed Forces for a period of four years. At the end of this tenure, upto 25% of these recruits, the so called 'Agniveers', can join the services on a permanent commission (another 15 years), subject to merit and organisational requirements.

Aspirants between the ages of 17.5 years and 23 years are eligible to apply (the upper age limit was increased from 21), and the recruitment standards remain the same as with regular service, prior to Agnipath. At present, all sailors, airmen, and soldiers, except the technical cadre of the medical branch, are recruited to the services under the scheme, which has also opened doors for the recruitment of women to the IAF and the Navy.

The scheme was announced in June 2022, after military recruitment was paused for two years due to the Covid-19 pandemic.

How are Agniveers compensated?

Agniveers draw a basic salary of Rs 30,000-Rs 40,000 per month, and are entitled to other risk and hardship allowances.

They contribute 30% of their monthly emoluments to the Seva Nidhi fund, which the government matches. At the end of their service, they receive approximately Rs 11.71 lakhs (with interest) as a lump sum severance package from this fund, which is exempt from income tax.

If they die on duty, their family receives a lump sum of Rs 1 crore (including the Seva Nidhi package), and full pay for the period which the soldier could not serve. In case of disability, an Agniveer can receive upto Rs 44 lakh as compensation, depending on the percentage of disability suffered which is attributed to, or aggravated by military service.

How is Agnipath different from regular military service?

Unlike soldiers in regular service, Agniveers do not draw pensions post-retirement. Only the 25% of Agniveers who get absorbed into the forces after four years will receive pensionary benefits, although the initial four years of service will not be considered for these.

This is the biggest change that Agnipath has brought in. Not only does the scheme will help reduce the Armed Forces' permanent force levels, this in turn will considerably cut the defence pension bill, which has been a major concern for governments for many years.

Why was Agnipath introduced?

Apart from the unsaid intention of reducing the Armed Forces' wage and pension bill, the government has argued that the scheme will ensure the forces' "youthful profile". Defence Minister Rajnath Singh said in January 2023 that "Agnipath is a game changer for the Armed Forces... [and make them] youthful, high-tech and ultra-modern".

At the time the scheme was brought in, the average age in the Armed Forces was 32 years, which Agnipath will bring down to 26 years, if implemented.

Moreover, the government has argued that after the completion of their service, Agniveers would contribute to the civil society "through their education, skill, discipline and other qualities". "This will also lead to availability of a higher-skilled workforce to the economy which will be helpful in productivity gain and overall GDP growth," Singh had said during the scheme's launch, in 2022.

Lt Gen Anil Puri, additional secretary, Department of Military Affairs, had said dueing the scheme's announcement that the government will help rehabilitate soldiers who leave the services after four years, and provide them with skill certificates and bridge courses.

Why has Agnipath seen such strong opposition?

Critics say that the scheme creates a "lesser" cadre of soldiers, who work on the same tasks as those with full commission, but with lesser pay, benefits, and prospects.

A day before Punjab and Himachal Pradesh went to polls on June 1, Rahul wrote an open letter to President Droupadi Murmu. "I write to you... with an appeal to provide justice to Agniveers, who lay down their lives in service to the nation. The discrimination in the nature and extent of benefits accorded to the families of our slain Agniveers, compared to regular soldiers warrants your urgent attention," he wrote.

On the ground, this disparity has caused significant disaffection among those who see military recruitment as a path to economic stability and upward mobility. Multiple parties, including the Congress, AAP, RJD, and Samajwadi Party have called for the scheme to be scrapped.

Is the government willing to roll back the scheme?

Recently, the government has indicated that it is willing to alter the scheme if required, but without compromising on the Armed Forces' youthful profile. The Indian Express reported last month that the Forces too are carrying out an internal assessment on the impact of the scheme, based on which they will make recommendations to the government on possible changes.

All three services are learnt to have submitted their observations to the Department of Military Affairs.

How many Agniveers have been recruited so far?

In the Army, two batches of 40,000 Agniveers have completed training and are under posting. The third batch of 20,000 began training in November 2023. In the Navy, three batches of 7,385 Agniveers have completed training. In the IAF, 4,955 Agniveers have completed training.

3 STATES SEEK SHRINKING OF ECO-SENSITIVE AREAS IN WESTERN GHATS

Karnataka, Maharashtra, and Goa, three of the six states where the Centre has proposed eco-sensitive areas (ESA) to protect the Western Ghats, have sought a reduction in the extent of these ESAs to allow development works.

— The states flagged the need for rationalisation of these ESAs, spread over 56,825 sq km in the Ghats in their discussions with an expert panel appointed by the Centre to finalise a draft notification.

— Karnataka, where an area of 20,668 sq km was proposed as ESA, maintained its opposition to the K Kasturirangan panel report, which formed the basis for the original draft, saying the livelihood of people in the region would be hit.

— The Kasturirangan panel had identified 37 percent of the Ghats as ecologically sensitive and recommended prohibition or regulation of certain activities.

For Your Information:

What are Eco-Sensitive Zones?

— As per the National Wildlife Action Plan (2002-2016), issued by the Union Ministry of Environment, Forest and Climate Change, land within 10 km of the boundaries of national parks and wildlife sanctuaries is to be notified as eco-fragile zones or Eco-Sensitive Zones (ESZ).

— While the 10-km rule is implemented as a general principle, the extent of its application can vary. Areas beyond 10-km can also be notified by the Union government as ESZs, if they hold larger ecologically important "sensitive corridors."

WHY HEATWAVES HAVE NOT BEEN INCLUDED AS A NOTIFIED DISASTER IN THE DISASTER MANAGEMENT ACT

The ongoing spell of extreme heat in many parts of the country has once again reopened discussions on the inclusion of heatwaves as one of the notified disasters under the Disaster Management (DM) Act, 2005.

If the inclusion does happen, states will be allowed to use their disaster response funds to provide compensation and relief, and carry out a range of other activities for managing the fallout of a heatwave. Currently, states need to use their own funds for these activities.

What are notified disasters?

The DM Act was enacted in the wake of the 1999 Odisha super-cyclone and the 2004 tsunami. It defines a disaster as a "catastrophe, mishap, calamity or grave occurrence" arising from "natural or man-made causes" that results in substantial loss of life, destruction of property, or damage to the environment. It must also be of such nature which is "beyond the coping capacity" of the community.

If such an event happens, then the provisions of the DM Act can be invoked. The provisions allow states to draw money from the two funds that have been set up under this law — the National Disaster Response Fund (NDRF) at the national level and the State Disaster Response Fund (SDRF) at the state level. The states first utilise the funds available in the SDRF, and only if the magnitude

of the disaster is unmanageable with the SDRF, states seek the money from the NDRF. In the FY 2023-24, only two states drew money from the NDRF.

While the entire money of the NDRF comes from the central government, states contribute 25% of the money in the SDRF (10% in case of special category states), the rest comes from the Centre. The money in these funds cannot be used for any purpose other than response and management of notified disasters.

Currently, there are 12 categories of disasters which are notified under this Act. These are cyclones, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloudburst, pest attack, and frost and cold waves.

Why heatwaves were not included as notified disasters?

Though heatwaves are not a new phenomenon in India, and heat-related illnesses and deaths have been common in large parts of northern, eastern and central India, these were not viewed as a disaster when the Act came into being in 2005. It was because heatwaves were a common occurrence during summer, and not really an unusual weather event.

In the last 15 years, however, both the severity and frequency of heatwaves have increased. Due to increased economic activity, there is a far larger number of people who have to remain outdoors for their livelihoods or other reasons, exposing them to the risk of a heat-stroke. There are 23 states, which are vulnerable to heatwaves.

These states as well as several vulnerable cities have now prepared heat action plans (HAPs) to deal with the impacts of extreme heat. HAPs involve activities like creation of shaded spaces, ensuring availability of cool water in public places, distribution of simple oral solutions, and reorganising the schedules of schools, colleges and office working hours.

These measures require expenditure but state governments have not been able to use the SDRF for them. This is the reason for the demand for inclusion of heatwaves as a notified disaster in the DM Act.

Why is the Centre not adding heatwaves as a notified disaster now?

There are primarily reasons for this:

Finance Commission Reluctance

States have put the demand of including heatwaves as a notified disaster before the last three Finance Commissions — the periodically established Constitutional body that decides on the distribution of financial resources between the Centre and states.

However, the Finance Commissions have not entirely been convinced. The 15th Finance Commission, whose recommendations are currently being applied, said the existing list of notified disasters "covers the needs of the states to a large extent" and did not find merit in the request to include heatwaves.

But it endorsed an enabling provision created by the preceding Commission that allowed states to utilise at least a part of the SDRF money — up to 10% — for "local disasters" such as lightning or heatwaves, which states could notify on their own.

Using this new enabling provision, at least four states — Haryana, Uttar Pradesh, Odisha, and Kerala — have added heatwaves as local disasters.

The Centre has so far resisted demands to notify it as a national disaster, using the Finance Commission as an excuse.

Practical Difficulties

Although unstated, the main reason behind the reluctance to add heatwave as a notified disaster is the potentially huge financial implication of the move. The government has to provide monetary compensation — Rs 4 lakh — for every life lost because of a disaster that is in the notified list. Grievous injuries also have to be compensated.

Heatwaves claim a large number of lives every year, even though the recorded number of deaths have not been very high in recent years. But this is changing. This year, more than 500 heat-related deaths have already been reported. Once the government is mandated to provide compensation, a larger number of deaths could be revealed.

The other reason is the problem in attributing deaths to heatwaves. In most cases, heat itself does not claim lives. Most people die due to other pre-existing conditions, made worse by the impact of extreme heat. It is often difficult to ascertain whether it was heat that made the difference. This is very different from other disasters in whose case the identification of the victims is easier and more straight-forward.

For the five year period between 2021-26, the 15th Finance Commission had recommended an allocation of Rs 1,60,153 crore to the various SDRFs, a substantial sum of money. A state like Uttar Pradesh has been allocated about Rs 11,400 crore in its SDRF for the five-year period. Maharashtra's share is the maximum, about Rs 19,000 crore. This money is meant to deal with all kinds of disasters during this period. The fear is that even this money could become insufficient if heatwaves and lightning — another disaster that claims a large number of lives every year — is added to the notified list of disasters.

On the other hand, inclusion as a notified disaster can improve the management of heatwaves. Heat-related illnesses and deaths would be better reported, and authorities would be more alert to minimise the impacts of heatwaves.

WHAT VEGETARIANISM MEANS IN INDIA

If being vegetarian means having diets loaded with dal (pulses), sabzi (vegetables) and phal (fruits), sans any animal-origin products, most Indians would probably not make the cut.

The latest official Survey on Household Consumption Expenditure for 2022-23 (August-July) shows that the average monthly per capita spending in rural India on vegetables (at Rs 202.86), fresh and dry fruits (Rs 140.16) and pulses (Rs 75.98) was lower than on milk and milk products (Rs 314.22). The value of per capita consumption was similarly higher for milk (Rs 466.01) than vegetables (Rs 245.37), fruits (Rs 245.73) and pulses (Rs 89.99) even in urban India.

No less revealing is the per capita expenditure on dal, sabzi and phal in "vegetarian" Rajasthan being below the national average (both rural and urban) for these items. Or, for that matter, the value of vegetable consumption by the average person in the eight Northeast Indian states being higher than not just the corresponding all-India level, but even of "Vaishnav-Jain" Gujarat.

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Vegetarianism in India

Milk's the difference

Simply put, being vegetarian in India is not being vegan. Indians, if at all, are lacto-vegetarian. Even those who call themselves vegetarian generally don't abstain from consuming milk and dairy products.

In a monograph titled Key to Health – originally penned in 1942, while he was incarcerated at Pune's Aga Khan Palace – Mahatma Gandhi made a distinction between "vegetarian" and "flesh" foods. The latter included fowl and fish. Milk, for him, was an "animal food", like "sterile eggs" that are laid by hens (without being "allowed to see the cock") and do not develop into chicks.

"Milk is an animal product and cannot by any means be included in a strictly vegetarian diet...But experience has taught me that in order to keep perfectly fit, vegetarian diet must include milk and milk products such as curd, butter, ghee, etc.," he wrote, while hoping for the discovery by selfless scientists of a "vegetable substitute" that would obviate the "necessity of adding milk to [a] strict vegetarian diet".

The monthly per capita consumption expenditure on vegetables may be relatively low or even below the all-India average in Gujarat and Rajasthan. But the average rural Gujarati spends Rs 476.35 and her urban counterpart Rs 669.78 per month on milk, with these at Rs 660.85 and Rs 776.47 respectively for Rajasthan. The value of the per capita milk consumption in the two states is way above the corresponding average of Rs 314.22 for rural India and Rs 466.01 for urban India.

There is, perhaps, some nutritional underpinning to milk consumption being high among vegetarians in India. Animal products, including milk, are rich sources of protein. These contain a balanced combination of all essential amino acids that the human body cannot synthesise and have to, therefore, be supplied through one's diet. Plant proteins, by contrast, are incomplete. Even soyabean, pulses and legumes are deficient in the essential amino acids, methionine and cysteine.

What it means is that the pure vegan route requires a variety of plant protein sources, used in the right combination, to achieve the desired amino acid balance. An easier, more practical, alternative is to be lacto-vegetarian. Not for nothing that milk has traditionally been synonymous with purity and good health in India – even in regions or among communities steeped in anti-meat values,.

Which are the "vegetarian" and "non-vegetarian" states?

The accompanying tables show that the states where the average household monthly per capita expenditure on milk and dairy products is higher than on egg, fish and meat – in other words, "vegetarian" – are primarily in North, West and Central India.

These cover the Vaishnav-Jain-Arya Samaj belt of Gujarat, Rajasthan, Haryana and Punjab, the Hindi heartland of Uttar Pradesh, Madhya Pradesh and Bihar, and, to a lesser extent, Maharashtra and Karnataka.

In all, there are some 14 "vegetarian" states. That includes Sikkim, although the average person's monthly spend on egg, fish and meat there (Rs 555.02 in rural and Rs 608.20 in urban) is much above the corresponding all-India numbers of Rs 185.16 and Rs 230.66 respectively.

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At the other end are the "non-vegetarian" states. There are 16 of them, whose average consumption expenditure on egg, fish and meat exceeds that on milk, at least in rural areas.

These include not only the hardcore fish and meat (even beef) eating states such as Kerala, Goa, West Bengal and those in the Northeast. Equally interesting are Odisha, Jharkhand and Chhattisgarh – states with significant tribal populations that is reflected in their high per capita consumption of egg, fish and meat relative to milk, especially in rural areas. Rural households in Andhra Pradesh and Telangana, likewise, exhibit a preference for what Indians normally view as "non-vegetarian" items.

The defining factor of "vegetarian" in India appears to be not dal-sabzi-phal, but doodh or milk. Those who have a lot of it tend to abhor flesh foods. Nutritionally too, so long as they drink doodh, they miss little by not eating fish, meat or egg.

WHAT IS THE NATIONAL HEALTH CLAIM EXCHANGE?

The story so far:

The Health Ministry along with the Insurance Regulatory and Development Authority of India (IRDAI) are working on measures aimed at allowing patients to access quality healthcare swiftly and with reduced out-of-pocket expenditure. The Ministry and IRDAI are launching the National Health Claim Exchange (NHCX), a digital platform which will bring together insurance companies, healthcare sector service providers and government insurance scheme administrators.

How is the NHCX expected to work?

The NHCX will serve as a gateway for exchanging claims-related information among various stakeholders in the healthcare and health insurance ecosystem. The integration with NHCX is expected to enable seamless interoperability of health claims processing, enhancing efficiency and transparency in the insurance industry, benefiting policyholders and patients, said the Health Ministry.

Asked if the system will help to accommodate the dynamic and diverse healthcare system of India, S. Prakash, MD & CEO designate, Galaxy Health and Allied Insurance Company Limited, said the healthcare landscape has been evolving to align with IRDAI's objective of achieving 'Insurance for All by 2047'. "The insurance industry is poised to support the implementation of this system by facilitating streamlined interactions between hospitals and insurers, establishing a seamless, paperless, and secure contractual framework. Acting as a centralised hub for all health claims, the NHCX will significantly alleviate the administrative burden on hospitals, which currently contend with multiple portals for various insurers," he explained. Twelve insurance companies and one TPA (Third Party Administrator) have completed the NHCX integration.

What about cashless claims?

A timeline has been fixed for insurance claims of cashless claims. The insurance authority has said that all cashless claims have to be processed within three hours of the receipt of discharge authorisation from the hospital. The insurance regulator has set the insurance provider a deadline of July 31 to put systems and processes in place to ensure the smooth facilitation of this latest directive.

What are some other incentives on offer?

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To encourage adoption of digital health transactions and digitisation of patient health records in the country, the National Health Authority had announced financial incentives under the Digital Health Incentive Scheme (DHIS) from January 2023. Under the DHIS, there is a provision that for every insurance claim transaction through NHCX, financial incentives of ₹500 per claim or 10% of the claim amount, whichever is lower, would be given to hospitals, according to a Health Ministry note.

Why is NHCX being brought in?

A paper titled, 'Health Insurance Coverage in India: Insights for National Health Protection Scheme', noted that health insurance is an important policy strategy to provide health care services as well as reduce high out-of-pocket expenditure which burden individuals. It points out that for all India, the hospitalisation cases are highest when insured from private purchase (54.4 per 1,00,000 persons). In urban areas, cases for inpatient care are observed to be highest for those covered by government-funded schemes (60.4 cases per 1,00,000 persons). On the contrary, in rural areas, in-patient cases are substantially higher for those purchasing private insurance (73.5 cases per 1,00,000 persons). Also, overall in-patient cases are higher for urban areas compared to rural areas.

Arguing for the NHCX, the Health Ministry states that the platform will help in standardisation and interoperability of health claims and will bring in seamless exchange of data, documents and images between payer (insurance company/TPA/government scheme administrator) and provider (hospital/lab/poly clinic). Industry experts also note that the platform, through uniform data presentation and centralised validation of claims data, could bring in a more standardised approach to healthcare pricing.

What are the challenges?

Health insurance contributes to approximately 29% of the total general insurance premium income in India. The primary hurdle in health insurance today lies in improving the relationship between hospitals and insurance companies, said Dr. Prakash, adding that the push towards digitisation requires active involvement from both parties, necessitating upgrades to current IT systems and enhanced workforce training. "Issues such as discharge delays and miscommunication between hospitals and insurers further complicate matters. Building trust among policyholders hinges on delivering efficient services. The NHCX portal aims to streamline the claims process by bringing all stakeholders onto one platform, reducing claim times and standardising procedures. While challenges like data breaches are being effectively tackled, the NHCX stands as an ongoing benefit for all involved, facilitating smoother operations within the healthcare space," he said.

2ND BIRD FLU CASE IN INDIA: 4-YEAR-OLD DISCHARGED AFTER 5-MONTH TREATMENT

A Second human case of bird flu subtype H9N2 was detected in India earlier this year — the first having been reported in 2019 — according to the World Health Organization (WHO). A 4-year-old child from West Bengal first reported symptoms in January this year, had to be admitted to intensive care unit for treatment twice, and was discharged finally in May.

— In its risk assessment of the case, the WHO said it expects to see sporadic cases of bird flu in humans in India with the infection circulating in the poultry.

— "There are several subtypes of avian influenza and cases are picked up from time to time by the network of laboratories that monitor flu cases. Not all types are dangerous, but deaths due to the infection have been seen globally."

— To prevent avian flu infection, people should minimise contact with animals and poultry and areas contaminated with their faeces. They should wash their hands with soap and water as often as possible, especially before and after handling animals. Those at high risk of severe disease such as children, older people and pregnant women should avoid participating in slaughtering, collecting eggs, or preparation of these foods, as per WHO guidelines.

For Your Information:

— Bird flu, also known as avian flu, refers to an infectious viral illness that mainly infects and spreads among poultry and some wild birds. There are different strains of bird flu virus, which have been circulating for a very long time among at least 100 bird species, including wild waterfowl, such as ducks and geese, without much harming them.

— "There are two types of H5N1 — low and highly pathogenic. While the low pathogenic type is usually seen in birds in the region — and has in fact caused at least two outbreaks in birds in Kerala — the highly pathogenic type is not commonly seen in birds, let alone animals."

WHY OPENING ALL FOUR GATES OF PURI JAGANNATH TEMPLE WAS TOP PRIORITY FOR NEW BJP GOVERNMENT IN ODISHA

All four gates of the Jagannath temple in Puri were opened for devotees on Thursday (June 13), a day after Odisha's new BJP Chief Minister Mohan Charan Majhi took oath.

"With the blessings of Lord Jagannath, the BJP formed a government in Odisha. As promised by our party, the first proposal which we approved in our cabinet was to open all four entrance gates of the temple," Majhi told the media.

This comes four years after three of the four entrances to the 12th century shrine were closed by the previous Biju Janata Dal government under Naveen Patnaik.

Puri's Jagannath temple, among the most revered Hindu shrines in the state (and India), is dedicated to the worship of Lord Jagannath, believed to be an incarnation of Vishnu, along with his older brother Balabhadra and sister Subhadra. It is one of the chardhams, four of the most sacred pilgrimage sites for Hindus, and thus sees heavy footfall.

The four gates

The four gates of the Jagannath temple are located on the mid-points of its boundary wall, and face the four cardinal directions. They are named after different animals.

The main east-facing entrance is called the Singhadwara (or the 'Lion's Gate'), with two stone sculptures of lions standing guard. According to popular belief, those who enter through this gate attain moksha (liberation from the cycle of birth-rebirth).

The north, south and west entrances are known as Hastidwara ('Elephant Gate'), Aswadwara ('Horse Gate') and Vyaghradwara ('Tiger Gate'), respectively. In popular belief, entering through the Aswadwara helps one shed kama (lust), entering through Vyaghradwara reminds one of one's

dharma (cosmic law underlying right behaviour and social order), and entering through the Hastidwara brings wealth.

Behind gates being shut

The Jagannath temple was closed for devotees after the pandemic-induced lockdown began on March 25, 2020. It was opened nine months later, on December 23. But only the main entrance was kept operational.

The state government under Patnaik cited the 'Srimandir Parikrama' project as the reason for the gates' closure. Inaugurated earlier this year, the ambitious Rs 800-crore project involved the development of a 75-metre-long heritage corridor around the temple, and aims at providing improved amenities for devotees.

But even after the corridor's inauguration, the three gates remained firmly shut, leading to massive queues at the Singhadwara, and calls for their opening.

BJP makes it a poll issue

The BJP, which recently wrested control of Odisha from the 24-years long incumbent BJD, has been demanding that all four gates be reopened for some time now. They accused the BJD government of becoming a 'barrier' between the temple gods and their devotees, and even linked the gates' closure to Odia asmita (Odia pride).

This came as the BJP was trying to corner the BJD over the growing influence of V K Pandian, a Tamil Nadu-born ex-IAS officer, in the BJD, also invoking rhetoric surrounding Odia pride.

As elections drew nearer, Union Home Minister Amit Shah repeatedly said in public meetings that the BJP would open all four entrances "within hours" of assuming power. The party even included this in its manifesto.

And the party made good on this promise. Majhi visited the temple on Thursday early morning, along with all his ministers, a number of MLAs, Puri MP Sambit Patra, and other senior BJP leaders. He has also announced the creation of a Rs 500-crore corpus for the safety, security and beautification of the Jagannath temple.

THOUSANDS OF KASHMIRI PANDITS TAKE PART IN KHEER BHAWANI TEMPLE FESTIVAL

Thousands of Kashmiri Pandits converged at the Kheer Bhawani temple in Kashmir Valley's Ganderbal district to attend the annual festival of Zyestha Ashtami on Friday. Many of them had migrated to different parts of the country in the 1990s in the wake of raging militancy.

"My family has been here for the past four days. The Kheer Bhawani temple has been of great importance to Pandits for centuries. We all prayed for peace in Jammu and Kashmir," Ajay Ganjoo, now a resident of New Delhi, said.

Scores of Muslims also joined the Kheer Bhawani mela and set up stalls outside the temple "to convey the message of Kashmiriyat". "Muslims, like in the past, sold puja paraphernalia to Pandit brethren," Sajid Sheikh, a Valley resident, said.

The temple of Kheer Bhawani is located amid chinar trees and has a natural spring, which is considered auspicious by Pandits.

"This time the water is nirmal [clean and transparent]. It's a good omen. We are hopeful of peace returning to Kashmir and Pandits returning to their homes," Bitto Kaul, a devotee, said.

J&K Lieutenant-Governor Manoj Sinha said that over 30,000 devotees paid obeisance during the Kheer Bhawani mela at Tulmulla on Friday. Security was tightened in the area as nine pilgrims were killed and over 33 injured when a bus was attacked by militants in Reasi's Katra area on June9.

Several J&K political leaders, including National Conference president Farooq Abdullah and Iltija Mufti, Peoples DemocraticParty leader and daughter of the party president Mehbooba Mufti, visited the temple and greeted the Pandits on the occasion. The leaders, in separate statements, said they also prayed for the return of Kashmiri Pandits to the Valley.

ADJUTANT LOSES TERRITORY

The greater adjutant stork is one of the most endangered bird species. Its habitat is in the Brahmaputra valley of Assam. The birds are found mostly in three districts of Assam — Guwahati, Morigaon, and Nagaon.

The wetlands in and around Guwahati were home to these storks, which depended on them for food, water and shelter. But the biodiversity hotspots have given way to buildings due to rapid urbanisation and the habitat loss is a major threat for the survival of this bird species.

Today, the greater adjutant stork is described as endangered on the Red List of Threatened Species by the International Union for Conservation of Nature.

Earlier, the State capital had the largest concentration of greater adjutant storks in the country. But with their habitat usurped by concrete, and the loss of food sources, these large birds — some almost five feet tall — are now seen only at a garbage dumping site near the Deepor Beel Wildlife Sanctuary, a Ramsar site.

Between October and February is the time when fish and other live prey can be found in abundance, and this period is also the breeding season for the greater adjutant stork. During the non-breeding season, these birds forage in urban waste disposal sites.

Principally carnivorous, the greater adjutant stork preys on fish, frogs, snakes and other reptiles, eels, birds, and, also, carrion.

Seasonally dependent on wetlands for foraging and tall trees for roosting and nesting, the storks suffer from the ongoing destruction of habitat through encroachment, overfishing and drainage projects. In Guwahati city, most of the roosting trees are located on private land and many of them have been felled or are being cut down.

Though the species has received legal protection in India, in many areas, people drive out these birds as they may carry pieces of rotting meat to feed their hatchlings and because their droppings carry a strong odour.

BUSINESS & ECONOMICS

US FED DECISION: STAYING HAWKISH

As the US heads for a presidential election in November, the Federal Reserve, the country's central bank, has signalled that it is unwilling to let interest rates soften in a hurry. This may not just be a concern for President Joe Biden and his chances of re-election. Given that the US is the world's largest economy and the US dollar is the most important global currency, actions of the "Fed" (as the Federal Reserve is called) are keenly watched by policymakers across the world, especially among emerging economies like India. That's because higher interest rates in the US strengthen the dollar vis a vis other currencies, and this, in turn, incentivises investors to pull their money out of emerging economies and take it back to the US. In fact, even the mere suggestion of an interest rate hike can derail the macroeconomic stability of emerging economies, as was witnessed during the Taper Tantrum episode in 2013 when the then Fed chair, Ben Bernanke's, hint at monetary tightening led to a flurry of capital outflows from the "fragile five" economies, which also included India.

Unlike India, where the RBI directly tweaks the repo rate (or the interest rate at which it lends to the banking system), in the US the Fed "targets" the so-called Federal Funds Rate. The FFR is the interest rate at which commercial banks borrow from each other. But the Fed can make this rate go up or down by tweaking the overall supply of money. Justifying the decision, current Fed chair Jay Powell said that the Fed does not expect it would be appropriate to reduce the target range from 5.5 per cent until it has gained greater confidence that inflation is moving sustainably to the 2 per cent target. Again, unlike India, where the RBI targets 4 per cent inflation, the Fed targets 2 per cent. In many ways, the Fed's action is similar to the RBI's hawkish stance. Just like the RBI, the Fed also wants to make sure that it does not reverse its policy restraint too soon lest it leads to a spike in inflation.

It is true that over the years, India's economy has become more resilient to the actions of the Fed. The RBI has repeatedly said that its actions are independent of the Fed — that is, it can cut or raise rates even when the Fed doesn't. Still, the Fed's restraint gives the RBI another reason to desist from cutting domestic interest rates too soon, lest it worsens the interest rate differential between the two economies.

RUPEE ENDS AT RECORD LOW OF 83.57 AGAINST US DOLLAR

Indian rupee closed at a record low of 83.57 against the US dollar on Tuesday ahead of the outcome of the US Federal Open Market Committee (FOMC) and on strong greenback against major currencies. Forex market participants said that the pressure on rupee is on account of strong dollar against major currencies and as the market is getting a bit nervous going into the Fed meeting. "The domestic currency is expected to trade with a slight negative bias on the strong US dollar and elevated crude oil prices. However, positive global markets and fresh foreign inflows may support rupee at lower levels."

For Your Information:

— The Effective Exchange Rate (EER) is an index of the weighted average of the rupee's exchange rates vis-à-vis the currencies of India's major trading partners. The currency weights are derived from the share of the individual countries to India's total foreign trade.

— There are two measures of EER- Nominal EEF and Real EEF.

— The Reserve Bank of India has constructed NEER indices of the rupee against a basket of six and also of 40 currencies. It is a trade-weighted average rate at which the rupee is exchangeable with a basic currency basket, comprising the US dollar, the euro, the Chinese yuan, the British pound, the Japanese yen and the Hong Kong dollar.

— The NEER indices are with reference to a base year value of 100 for 2015-16: Increases indicate the rupee's effective appreciation against these currencies and decreases point to overall exchange rate depreciation.

— The REER is basically the NEER that is adjusted for the inflation differentials between the home country and its trading partners. If a country's nominal exchange rate falls less than its domestic inflation rate – as with India – the currency has actually appreciated in "real" terms. It covers a bigger basket of 40 currencies of countries that account for about 88% of India's annual trade flows.

RECALCITRANT JUMBO

The RBI's Monetary Policy Committee (MPC) has for an eighth consecutive meeting chosen to leave the benchmark repo rate unchanged at 6.50% on concern that 'elevated food inflation could derail' its efforts to ensure durable price stability. Governor Shaktikanta Das, who had just two months ago spoken of the 'elephant' of inflation having begun its journey back to the forest after going on a walkabout, flagged the risk that stubborn food price gains pose to the overall disinflation path as justification for the MPC's stand. Food inflation as measured by the Consumer Food Price Index accelerated to a provisional 8.7% in April, from March's 8.52%, and recent indicators such as Crisil's food plate costs suggest that price gains spurred by a surge in tomato, onion and potato prices may have quickened even further in May. The Centre for Monitoring Indian Economy (CMIE) forecast on June 8, that headline retail inflation likely increased by 31 basis points last month to 5.14%, driven almost entirely by a 40 basis points acceleration in food price gains to 9.1%. The MPC, which voted by a 4-2 majority to "remain focussed on withdrawal of accommodation to ensure that inflation progressively aligns to the target" of 4%, flagged the challenges it faces in achieving this goal as increasing adverse climate events trigger supply shocks that make it very hard to foresee the food price trajectory. The CMIE cited last month's heatwaves as the cause for the rise in the costs of fruits and vegetables.

The MPC is also only too aware that besides the threat from escalating food costs, which remain vulnerable to the precariously low water storage levels at the country's reservoirs as well as the ongoing exceptionally hot summer temperatures, rising prices of industrial metals could undermine the deflationary trend in core inflation. Add to the mix the uncertain outlook for crude oil prices given the tensions in West Asia and the output cuts being implemented by the OPEC+ producer nations, and it is a recipe for heightened uncertainty on the inflation path. The RBI's latest round of surveys underline precisely why price stability is the central concern for policymakers. While households' surveyed in May expect inflation to quicken for all major product groups, both over the three months and one year ahead periods, consumer confidence too moderated from the March round of the survey with an increased majority of almost 80% of respondents expecting price gains to accelerate in one year's time. Governor Das is absolutely justified in maintaining an unwavering focus on anchoring inflation expectations, given that it is, as he put it, "the required foundation for sustained" long-term growth.

CONFIDENCE ABOUT ECONOMY DECLINES AFTER CONSISTENT RECOVERY

Confidence about the economy, job opportunities and income levels marginally declined over the past two months, shows data from the Reserve Bank of India's (RBI) bi-monthly Consumer Confidence Survey. The decline in confidence came after a consistent and steady increase in optimism in the post-COVID period.

The survey was conducted in May 2024, as the country cast its votes for the Lok Sabha elections, in urban households across 19 cities including, Mumbai, Kolkata, Delhi, and Chennai. It aims to determine current perceptions and expectations on various aspects of the economy. The findings quantify opinions on the general economic climate, employment, price levels, incomes, inflation, and trends in expenditure, compared to the situation from a year-ago.

In May 2021, only 7.5% of respondents in the RBI survey believed that the economy had improved compared to a year-ago. Following this, the share of optimistic respondents consistently increased, with 22.5% of respondents claiming an improvement in May 2022 and 32.1% in May 2023. Confidence about the economy continued to recover in the following months and reached a peak with 41.2% saying it improved in March 2024. However, in the latest round of the survey in May 2024, this share recorded a marginal decline to 40%, halting the recovery.

FOOD FACTOR

May's provisional headline retail inflation may have marginally eased to a 12-month low of 4.75%, but food price gains remained unrelenting last month giving little reason to cheer. Yet again, vegetables and pulses were key contributors in keeping food inflation as measured by the Consumer Food Price Index little changed at 8.69%, with urban consumers feeling the heat more than their rural counterparts as the pace of year-on-year change in food prices in India's cities and towns hit a three-month high of 8.83%. Vegetable inflation not only continued to hover above 27% for a sixth straight month, at 27.3%, but month-on-month gains too accelerated by almost 200 basis points to a six-month high of 3.22%. Tomato, onion and potato prices led the charge, with these heavyweights in the vegetables sub-group logging sequential gains of 1.5%, 0.5% and a bruising 15.1% in the case of potato. Nor is the outlook for vegetable inflation particularly reassuring with June's retail price trends as well as the lag from escalating wholesale costs pointing to more pain ahead for consumers running their household budgets. Data from the Department of Consumer Affairs Price Monitoring Division show the all-India average retail price of tomato, onion and potato, as on June 14, were 21%, 14% and 8% higher, respectively, month-on-month, and a significantly steeper 35%, 58% and 44% costlier, respectively, when compared with their year-earlier prices. At the wholesale level, sequential inflation in tomato, onion and potato was disconcertingly faster at 28%, 18% and 9%, respectively, underlining the challenges policymakers face in containing prices through trade measures.

Food inflation also manifested last month with a quickening in price gains in the category's largest constituent — cereals and products — to a five-month high of 8.69%. Retail cereal prices from the price monitoring division's daily dashboard show rice was 13% costlier than on June 14, 2023, wheat was 5.7% more expensive and inflation in wheat flour (atta) was 4.7%, signalling that here again the prospects of a let-up in price pressures are remote, at least for now. Pulses saw inflation quicken again, after a mild slowing in April to 17.1% with the pace of sequential price rise hitting a six-month high of 1.53%. Official price data for June 14 showed gram dal, tur, urad and moong costlier by 17%, 27%, 13% and 8.5% than a year earlier, respectively. Rainfall data from the India

Meteorological Department as on June 14 that show a 12% deficit since June 1 is also a cause for mild concern, an 'above normal' monsoon forecast notwithstanding. With food inflation particularly hitting hardest the poorer sections, policymakers can ill afford to drop their guard.

INSTANT FLOUR MIXES FOR DOSA, IDLI TO ATTRACT 18% GST

Instant mixes, including idli, dosa and khaman flour, cannot be classified as chhatua or sattu and 18 per cent GST should be levied on them, the Gujarat Appellate Authority for Advance Ruling (GAAAR) has ruled.

— Gujarat-based Kitchen Express Overseas Ltd had approached the AAAR against the ruling by the GST advance authority, saying that its seven instant flour mixes are not 'ready to eat' but are required to undergo certain cooking processes and can be called 'ready to cook'.

— The company sells flour mixes of gota, khaman, dalwada, dahi-wada, dhokla, idli and dosa in powder form and pleaded that it is akin to sattu and should attract GST of 5 percent.

— The GAAAR rejected the appellant's contention, saying that ingredients that go into the making of 'instant flour mixes' are not covered under the relevant GST rules as is the case with sattu. According to a circular issued by the CBIC, small amounts of ingredients that are mixed to make sattu are specified in the GST rules to be eligible for a 5 percent tax rate.

— The appellate authority also said that merely because the end consumer of the instant mix flour is required to follow certain food preparation processes before such products can be consumed is no grounds that 18 per cent GST should not be levied on it.

For Your Information:

— GST is a consumption tax and is levied at the final consumption point. The principle used in GST taxation is the Destination Principle.

IN FIRST MEET, CABINET OKAYS 3 CR NEW HOUSES UNDER PMAY

Chairing the maiden Cabinet meeting of his third term on Monday, Prime Minister Narendra Modi approved government assistance for the construction of three crore rural and urban houses under Pradhan Mantri Awas Yojana (PMAY). Of the three crore houses, two crore will be constructed under PMAY-Gramin, while 1 crore under PMAY-Urban. After the Cabinet meeting an official source said, "It has been decided in the Cabinet meeting today to provide assistance to three crore additional rural and urban households for the construction of houses, to meet the housing requirements arising out of the increase in the number of eligible families."

— Under the PMAY-G, each beneficiary gets funds up to Rs 1.2 lakh in the plains and Rs 1.3 lakh in hilly states, difficult areas, and tribal and backward districts under the Integrated Action Plan (IAP). It is also learnt that the Centre has decided to increase the assistance provided to the beneficiaries under the PMAY-G by about 50 per cent. The sources said the Centre has decided to increase the cost of construction of the PMAY-G house from existing Rs 1.2 lakh to Rs 1.8 lakh in the plains and Rs 1.3 lakh to Rs 2 lakh in the hilly areas.

— These additional 2 crore PMAY-G houses will be over and above the 2.95 crore houses sanctioned under the rural scheme since its inception in 2016. Of these 2.95 crore, 2.61 crore have been built under the PMAY-G till date.

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— The Centre and states share expenses in 60:40 ratio in case of plain areas, and in 90:10 ratio for northeastern states, two Himalayan states and the UT of Jammu and Kashmir. The Centre bears 100 per cent cost in case of other Union Territories, including the UT of Ladakh.

— The PMO said after being sworn in as the Prime Minister for the 3rd time, Modi signed his first file authorising the release of 17th instalment of PM Kisan Nidhi.

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 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).

INEFFECTIVE DISPUTE RESOLUTION

On June 3, the Finance Ministry announced a surprising policy decision. After trying to promote India as a hub for arbitration for decades, the Government of India now feels that arbitrations do not work for them and that the arbitration clause should be dropped from all future government/government-controlled entities' contracts (except in relation to minor disputes of a value of Rs 10 crore or less).

— "The core reason given for this dramatic shift in policy is the government's perception that arbitrators often lack integrity and collude with private parties and the resultant award becomes difficult to dislodge (given the limited grounds available in law to challenge an arbitral award on merits)."

— "The government's change of stance in abandoning arbitration and pitching all its hope in its ability to settle disputes "without shirking or avoiding responsibility or denying genuine claims" is fundamentally flawed and rests on misplaced wishful thinking."

— "It will also prove to be a costly mistake and a major impediment in bridging the infrastructural gap, rendering projects bankable and achieving the five trillion-dollar economy aspiration."

— " ...If there is no settlement, the aggrieved party is left to the mercy of the courts. There can be no two opinions that the courts are not equipped to handle heavy commercial disputes in any sensible way. The courts are so overworked that they are barely able to deal with the award challenge proceedings (where the scope of judicial review is minimal)."

— "The 2015 Amendment to the Arbitration Act, prescribes that award challenges shall be disposed off expeditiously "and in any event" within one year. The reality is that these challenges linger for around five years or so in the court of first instance alone."

— "Arbitrations may not be perfect, but they are clearly more workable than court litigation. To ask the private party to take its dispute to court is to turn a blind eye to reality and throw the litigant under the bus. Effective dispute resolution methods are a necessary adjunct to economic growth."

For Your Information:

— Arbitrations are governed under the Arbitration and Conciliation Act, 1996 which was enacted as a solution for moving commercial litigation away from overburdened courts.

MUMBAI, DELHI AMONG TOP 5 GLOBAL CITIES IN HOUSE PRICE RISE

Mumbai and Delhi were among the top five global cities that recorded an increase in their average annual house prices while Bengaluru witnessed a slight drop in prime residential or luxury homes in the January-March quarter of calendar year 2024, says a study.

— Mumbai, with a rise of 11.5 per cent in the index, recorded the third highest year-on-year (YoY) growth in prime residential prices in the January-March quarter among global cities, pushing it up the ranking table by 3 places to the third position from its sixth position in January-March 2023, Knight Frank said in its recent report 'Prime Global Cities Index January-March 2024'.

— National Capital Region of Delhi which witnessed a rise of 10.5 per cent in house prices during the quarter was at the fifth position. NCR rose from 17th rank in Jan-March 2023 to fifth in Jan-March 2024 with a growth of 10.5 per cent YoY. However, Bengaluru observed a decline in ranking from 16th place to 17th rank even while it recorded a 4.8 per cent YoY growth in residential prices.

— Manila was at the top with a rise of 26.2 per cent and Tokyo came second with a rise of 12.5 per cent.

— New Delhi and Mumbai have witnessed a surge in house prices driven by robust economic growth, as indicated by our findings, with annual GDP growth exceeding 8 per cent, Knight Frank said.

— The Prime Global Cities Index is a valuation-based index tracking the movement of prime residential prices across 44 cities worldwide. The index tracks nominal prices in local currency, the study said.

IRDAI ALLOWS POLICYHOLDERS TO CANCEL POLICIES, GET REFUND

Giving more flexibility and freedom to policyholders, the Insurance Regulatory and Development Authority of India (IRDAI) has said retail policyholders can cancel an insurance policy at any time during the term by informing the insurer and get the refund for the remaining policy period.

"In case the policyholder cancels the policy, he/ she is not required to give reasons for cancellation. The insurer can cancel the policy only on the grounds of established fraud, by giving minimum notice of 7 days to the retail policyholder," IRDAI said on Tuesday while announcing a host of reforms in the sector. Every insurer should have a retail product which is identified and designated as base product defining the necessary minimum coverage in each line of business, it said. If the customer cancels the policy, the insurer should refund proportion premium for unexpired policy period, if the term of the policy is up to one year and there is no claim made during the policy period, it said. The refund premium for the unexpired policy period should be made in respect of policy with the term more than one year and the risk coverage for such policy years has not commenced, it said in a master circular.

The regulator said no claim should be rejected for want of documents. All the required documents should be called at the time of underwriting the proposal. "The customer may be asked to submit only those documents that are directly related to the claim settlement such as claim form, driving license, permit, fitness, FIR, untraced report, fire brigade report, post mortem report, books of accounts, stock register, wage register and repair bills (only in cases where cashless is not available), wherever applicable.

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LIFE & SCIENCE

WHY IS CHINA PROBING THE FAR SIDE OF THE MOON?

The story so far:

In the pre-dawn hours (IST) of June 4, a small spacecraft bearing lunar samples took off from the moon's far side, headed for an orbit that would bring it in contact with an orbiter waiting for it. There, the spacecraft 'handed over' the samples to a capsule on the returner, which will bring the samples back to the earth in a two-week journey. Scientists will thus finally have access to pieces of moon soil and rocks from its far side. This is China's ambitious and ongoing Chang'e 6 mission.

What are the Chang'e missions?

China's moon missions are called Chang'e, named for the goddess of the moon in Chinese mythology. The Chinese National Space Administration (CNSA) launched the Chinese Lunar Exploration Programme (CLEP) in 2003, and the first Chang'e mission happened in 2007. Chang'e 1 created a map of the moon's surface.

With Chang'e 2, CLEP launched phase I of its moon missions, and equipped the orbiter with a better camera. Its images were used to prepare the Chang'e 3 mission's lander and rover for their descent on the moon, which they successfully achieved on December 14, 2013, starting CLEP's phase II missions.

In 2019, Chang'e 4 carried the first lander and the rover to descend on the moon's far side and explore this more mysterious region.

Phase III began with the Chang'e 5 mission. In late 2020, it deployed a lander on the moon's near side. It included a mission component called an ascender, which, after collecting and stowing some lunar soil samples, launched itself into orbit. There, an orbiter collected the samples, transferred them to a returner, which brought them to the earth.

Chang'e 6 is attempting to replicate its predecessor's feat but from the moon's far side. The scientific goal here is to understand why the far side is so different from the near side.

What is the far side?

The moon is tidally locked to the earth: the lunar hemisphere facing the earth will always face the earth, and the hemisphere facing away (far side) will always face away. The far side has rockier terrain and fewer smooth plains.

Thus, it's harder to land a spacecraft on the far side — more so since it's impossible to communicate directly from the earth with a spacecraft here: there's no line of sight. A workaround is to have a second spacecraft in space that relays signals between ground stations on the earth and the surface spacecraft. This makes the mission more complex.

The far side is expected to be a good place to install large telescopes, which would have a view of the universe unobstructed by the earth. ISRO and scientists at the Raman Research Institute, Bengaluru, are currently working on such a device, called PRATUSH.

What is the status of Chang'e 6?

CNSA launched the 8.3-tonne Chang'e 6 orbiter-lander assembly on May 3 and it entered a lunar orbit on May 8. On May 30, the lander complex split from the orbiter and descended over a large crater called Apollo on June 1.

CLEP scientists coordinated this part of the mission with help from the Queqiao 2 relay satellite, which the CNSA launched in February this year into an elliptical orbit around the moon. Once within Apollo, a drill plunged into the soil, and with help from a scoop extracted about 2 kg of material, and transferred it to the ascender. On June 4, the ascender took off for moon orbit. There, it rendezvoused with the orbiter and transferred the samples to a capsule in the returner on June 6.

The returner is expected to bring them to the earth on June 25.

What might the samples reveal?

Since Chang'e 6 is a Chinese mission, the 'what' depends on the samples as much as 'by whom' and 'when'.

CNSA hasn't been sharing periodic and detailed updates, as has been expected from other moon missions.

Once CNSA retrieves the sample-bearing capsule, Chinese scientists will have first crack at it before sharing access with foreign research groups based on their proposals. It's unknown whether any Indian research groups have applied for access.

Scientifically, the far-side samples are expected to inform insights about why the moon is the way it is and the formation of planets. For example, scientists believe the terrain asymmetry between the two lunar hemispheres is because of heat released by the earth when the moon was forming and thermochemical characteristics near the moon's surface.

HOW SPACEX'S STARSHIP CAN REVOLUTIONISE SPACE TRAVEL AND EXPLORATION

Elon Musk-owned SpaceX's Starship rocket accomplished its first fully successful test flight last week, with both its booster and spacecraft making a gentle splashdown after an hour-long sub-orbital space flight. This was SpaceX's fourth attempt to launch the mammoth Starship.

— Starships' booster (called Super Heavy) detached from the upper section (or the Starship spacecraft), to make a soft landing in the Gulf of Mexico. The spacecraft, however, travelled halfway around the planet to make a controlled splashdown in the Indian Ocean.

— Starship is a two-stage heavy lift-off vehicle designed to carry crew or/and cargo to Earth orbit, the Moon, Mars, and beyond.

— The Super Heavy booster consists of 33 Raptor engines that can produce 74 meganewtons of thrust. NASA's biggest currently-operational rocket, the Space Launch System (SLS), generates 39 meganewtons off the pad.

— The Starship is eventually expected to be able to carry up to 150 tonnes of payload to low-Earth orbit, and at least 100 tonnes to the Moon and Mars. This is more mass than humankind has collectively soft-landed on the lunar surface so far.

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— As Starship is capable of returning to Earth, it would also be able to bring back huge amounts of samples from the Moon and other planets, which could help scientists unlock numerous mysteries about our solar system and the origin of life.

— The rocket system is central to NASA's Artemis program, which aims to put astronauts back on the Moon by 2030. It is also supposed to take astronauts to Mars before the end of the next decade.

For Your Information:

— The Indian Space Research Organisation and its partners successfully demonstrated a precise landing experiment for a Reusable Launch Vehicle at the Aeronautical Test Range (ATR), Chitradurga, Karnataka in April, 2023.

— The Reusable Launch Vehicle Autonomous Landing Mission (RLV LEX) test was the second of five tests that are a part of ISRO's efforts to develop RLVs, or space planes/shuttles, which can travel to low earth orbits to deliver payloads and return to earth for use again.

APOLLO 8 ASTRONAUT WHO TOOK 'EARTHRISE' PHOTO DIES IN PLANE CRASH

Retired astronaut William Anders, who was one of the first three humans to orbit the moon, capturing the famed "Earthrise" photo during NASA's Apollo 8 mission in 1968, died on Friday in the crash of a small airplane in Washington state. He was 90.

— NASA chief Bill Nelson paid tribute to Anders on social media with a post of the iconic image of Earth rising over the lunar horizon, saying the former Air Force pilot "offered to humanity among the deepest of gifts an astronaut can give."

— A U.S. Naval Academy graduate and Air Force pilot, Anders joined NASA in 1963 as a member of the third group of astronauts. He did not go into space until Dec. 21, 1968, when Apollo 8 lifted off on the first crewed mission to leave Earth orbit and travel 240,000 miles (386,000 km) to the moon.

— Anders was the "rookie" on the crew, alongside Frank Borman, the mission commander, and James Lovell, who had flown with Borman on Gemini 7 in 1965 and later commanded the ill-fated Apollo 13.

— Apollo 8, originally scheduled for 1969, was pushed forward because of concerns the Russians were accelerating their own plans for a trip around the moon by the end of 1968. That gave the crew only several months to train for the historic but highly risky mission.

UN DECLARES 2025 THE YEAR OF QUANTUM SCIENCE

The United Nations has said 2025 will be designated the 'International Year of Quantum Science and Technology'. In a statement, the body said the initiative will be "year-long", "worldwide", and that it will "be observed through activities at all levels aimed at increasing public awareness of the importance of quantum science and applications."

The proclamation is the result of a resolution led by Mexico in May 2023 and which was soon joined by other countries. By November that year, almost 60 countries had co-sponsored the resolution and the UNESCO General Conference adopted it. In May this year, Ghana submitted a

draft resolution to the U.N. General Assembly asking for an official proclamation, with the support of over 70 other countries. The General Assembly acceded on June 7.

The timing isn't entirely coincidental. Next year will be a century since the German physicist Werner Heisenberg published a famous paper in which he reinterpreted a series of tweaks — required for classical mechanics to make sense of the quantum phenomena being discovered in the late 19th and early 20th centuries — to lay the foundation stone of what would come to be called quantum mechanics. He was awarded the Nobel Prize for physics seven years later, roughly around the time he devised his famous uncertainty principle.

According to the UN statement, the proclamation has also received the endorsements of the International Union of Pure and Applied Physics, the International Union of Pure and Applied Chemistry, the International Union of Crystallography, and the International Union of History and Philosophy of Science and Technology.

Quantum science and technologies have been featuring more often in public conversations and issues of late thanks to quantum computers. While fully operational machines of this type don't yet exist, researchers and industry experts believe it is a matter of time.

In line with this belief, the Government of India announced a 'National Quantum Mission' in April 2023 at a cost of Rs 6,000 crore, to be implemented from 2023 to 2031 by the Department of Science & Technology (DST). According to Akhilesh Gupta, a senior DST advisor and the head of the Mission, it will have four verticals: quantum computing, quantum communication, quantum sensing and metrology, and quantum materials and devices.

Many researchers expect functional quantum computers will have transformative effects on electronics, clean energy, and drug development, given their superior computational abilities.

According to the U.N. statement, its proclamation "is a signal for any individual, group, school, institution, or government to use 2025 as an opportunity to increase awareness about quantum science and technology." It added that a steering committee is also "planning global initiatives and events, particularly those that reach audiences unaware of the importance of quantum science and technology."

Physics World reported that an opening ceremony is expected to be conducted on January 14, 2025, in Berlin.

EXPLAINED: ALL ABOUT KAVLI PRIZE, MIRRORING NOBEL IN FIELDS OF ASTROPHYSICS, NEUROSCIENCE, AND NANOSCIENCE

The winners of the 2024 Kavli Prize (not to be confused with the Kavli Medal) were announced on Wednesday. Eight winners were awarded for their contributions to astrophysics, neuroscience, and nanoscience.

Fred Kavli

The Kavli Prize is awarded in honour of Norwegian-American businessman and philanthropist Fred Kavli (1927-2013).

Born in Erejsford, Norway, Kavli moved to California in 1956 after getting an engineering degree. In the US, he began working for a company which built high-tech sensors for missiles, becoming its chief engineer within a year.

In 1958, he started his own enterprise, founding Kavlico. Today, the company is a leading manufacturer of pressure sensors and related systems, which are used in all kinds of industries, from aviation to home appliances. Kavlico's pressure transducers (devices which convert pressure into an electric signal) are known for their high accuracy, stability, and reliability.

In 2000, Kavli sold his company for $ 340 million, and established the Kavli Foundation, with the aim to support wide-ranging basic research to improve the quality of life for people worldwide. The foundation runs 20 institutes which specialise in astrophysics, neuroscience, nanoscience, and theoretical physics.

Nobel comparisons

"The Kavli Prizes are awarded in three areas: astrophysics, nanoscience and neuroscience — the largest, the smallest, and the most complex. I believe these prizes are in the most exciting fields for the twenty-first century and beyond," Kavli said, while describing the prizes.

The inaugural prize was announced in 2008, and awarded to seven scientists. Till date, 73 scientists from 19 countries have been honoured with the biennial award. Ten of them have gone on to win the Nobel Prize.

In fact, the Kavli Prize was designed to be like the Nobel in the fields of astrophysics, neuroscience, and nanoscience. But it is more far-reaching in its outlook. As per the will of Alfred Nobel, the Nobel Prize is only awarded for achievements made "during the preceding year". But the Kavli Prize does not operate under such a restriction.

The prize comprises a $1 million cash prize (per field), a scroll, and a medal, 7 cm in diameter. The award ceremony is more flamboyant than the one for the Nobel, with a red carpet rolled out for invitees.

Along with the US-based Kavli Foundation, the prize is given in partnership with the Norwegian Academy of Science and Letters, and the Norwegian Ministry of Education and Research.

Three independent selection committees review entries to present a unanimous recommendation to The Norwegian Academy of Science and Letters. Each committee comprises five members, who are nominated by science institutes around the world, including the Chinese Academy of Sciences, the French Academy of Sciences, Germany's Max Planck Society, the National Academy of Sciences in the US, and the Royal Society in the UK.

The award ceremony this year is scheduled to take place on September 3, at the Oslo Concert Hall. The Norwegian Royal Family will be handing out the prizes.

Winners in 2024

All eight scientists awarded the Kavli Prize this year are professors at leading American universities.

ASTROPHYSICS: This year's prize for astrophysics has been awarded to David Charbonneau of Harvard University, and Sara Seager, of the Massachusetts Institute of Technology. The duo have been recognised for discoveries of exoplanets, and the characterisation of their atmosphere. The citation states that the contributions of Charbonneau and Seager included pioneering "methods for the detection of atomic species in planetary atmospheres and the measurement of their

thermal infrared emission, thus setting the stage for finding the molecular fingerprints of atmospheres around both giant and rocky planets".

NANOSCIENCE: Robert Langer of MIT, Armand Paul Alivisatos of the University of Chicago, and Chad Mirkin of Northwestern University were given the prize for nanoscience. Langer was recognised for his breakthrough idea of nano-engineering a material for the controlled release of therapeutic bio-molecules, which could help the development of controlled drug delivery systems to treat diseases like aggressive brain cancer, prostate cancer and schizophrenia. Alivisatos devised semiconductor crystals or "quantum dots" which could be used as multi-colour fluorescent probes in bio-imaging. Today these are used for diagnostic imaging of patients, and helping research in fundamental medicine and biology. Mirkin introduced the concept of spherical nucleic acid (SNA), a new class of nucleic acids that are densely functionalised and oriented spherically around a nanoparticle core. SNAs have wide-ranging use in areas like intracellular detection, gene regulation and immunotherapy.

NEUROSCIENCE: The prize in neuroscience has been awarded to Nancy Kanwisher of MIT, Winrich Freiwald of Rockefeller University, and Doris Tsao of the University of California at Berkeley. The trio have been awarded for their collective effort over decades to map the linkage between facial recognition and the brain. While Kinwisher identified the exact brain's centre for face processing, Tsao and Freiwald took this knowledge forward using functional imaging and recording from individual brain cells to map out the neural architecture of the human brain.

HOW HORSES GALLOPED INTO HUMAN HISTORY: WHAT A NEW STUDY SAYS

The advent of horse-based transportation represented one of the seminal moments for humankind, connecting ancient peoples by enabling them to move quickly over long distances for the first time while also transforming how wars were waged.

But the timing of equine domestication and the subsequent broad use of horse power has been a matter of contention. An analysis of genome data from 475 ancient horses and 77 modern ones is providing clarity. It revealed that domestication actually occurred twice – the first time being a dead end – and traced the rise of horse-based mobility to around 2200 BC in Eurasia, centuries later than previously thought.

"Animal domestication, in general, changed human history, but no other animal was a king-maker as the horse was," said evolutionary biologist Pablo Librado of the Institute of Evolutionary Biology (IBE) in Barcelona and previously of France's CNRS research agency, lead author of the study published this week in the journal Nature.

"Think of Genghis Khan, with an empire stretching from the Sea of Japan to the doors of Europe. The world as we know it today has been shaped by horses. Think in agriculture, how important horses were as working animals. Think in New York or Washington 200 years ago, with carriages pulled by horses in the streets," Librado said.

What the study found

The genomic evidence showed that horses were first domesticated in Central Asia – northern Kazakhstan to be precise – about 5,500 years ago by people from what is called the Botai culture. But this domestication was based on obtaining meat and milk, not movement, and did not spread. The feral Przewalski's horses of Mongolia descended from those Botai horses.

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The domestication of a second equine bloodline began roughly 4,700 years ago in the western Russian steppes, trotting along for a period of centuries before horse-based mobility suddenly galloped across Eurasia about 4,200 years ago, the study showed. All modern domestic horses have their origins in this event.

The genomic evidence revealed a shift in breeding practices at that time to satisfy the demand for horses. People doubled horse production capacity by halving the time between generations from eight years to four, according to molecular archaeologist and study co-author Ludovic Orlando of the Center for Anthropobiology and Genomics of Toulouse in France.

"We detect close-kin mating only from that time, and not in the deeper past. This is a practice that wild or domestic horses tend to avoid unless breeders force them to mate with their relatives, to maintain and select for certain valued traits such as increased docility," Librado said.

"Once horses were spread across Eurasia, and the pressure to further expand them in space and numbers diminished, the horse generation time returned to normal values. The generation times were only reduced again in the last 200 years following industrial breeding – the emergence of new horse breed types tailored to specific tasks," Librado added.

Horse-based mobility allowed people to move quickly over large distances, speeding up communication and trade networks across Europe and Asia and enabling exchanges and interactions among diverse cultures. Chariots and cavalry reshaped warfare.

"This started a new era in human history, when the world became smaller, more global. This era lasted until the invention of combustion engines in the late 19th century," Orlando said.

"How many empires rose and fell because of a powerful cavalry?" Librado asked. "We believe that a key element in the early dispersion of horses was the invention of spoke-wheeled chariots, which in contrast to heavier wagons could be pulled by horses and not by cattle for the first time in human history."

There were massive human migrations in Eurasia at around 3,000 BC that spread Indo-European languages. Horse-based mobility previously was believed to have played a central role.

"It was thought that human steppe migrations about 5,000 years ago took place on horseback. Our work shows that at that time the horse did not move across the steppe. Hence, while people moved, horses did not," Orlando said.

NITROUS OXIDE EMISSIONS UP 40 % IN 40 YRS, MOSTLY FROM FARMS, SAYS STUDY

Emissions of planet-warming nitrous oxide gas rose by 40 per cent between 1980 and 2020, a study by the Global Carbon Project said on Wednesday.

— China (16.7 per cent), India (10.9 per cent), US (5.7 per cent), Brazil (5.3 per cent) and Russia (4.6 per cent) were the top five emitters of the gas more potent than carbon dioxide and methane.

— India has the lowest per capita emission of 0.8 kg N2O/person, the kg N2O/person figures for the other top emitters are China 1.3, US 1.7, Brazil 2.5 and Russia 3.3.

— High levels of nitrous oxide in the atmosphere can deplete the ozone layer and compound effects of climate change, the study said. On the earth, excess nitrogen contributes to soil, water and air pollution.

— Agricultural production and livestock rearing were the two key human-driven sources of nitrous oxide. In the last decade agricultural production, chiefly owing to the use of nitrogen fertilisers and animal manure, contributed to 74 per cent of the total anthropogenic nitrous oxide emissions, according to the study.

— "Agricultural emissions reached 8 million metric tons in 2020, a 67 per cent increase from the 4.8 million metric tons released in 1980," said the study.

— The world's farmers used 60 million metric tonnes of commercial nitrogen fertilisers in 1980. By 2020, the sector used 107 million metric tonnes. That same year, animal manure contributed 101 million metric tonnes for a combined 2020 usage of 208 million metric tonnes, as per the study.

— Among the 18 regions considered in this study, only Europe, Russia, Australasia, and Japan and Korea had decreasing nitrous oxide emissions.

— China and South Asia had the largest increases in nitrous oxide emissions from 1980 to 2020 at 92 per cent.

— Nitrous oxide is also emitted from natural sources such as oceans, inland water bodies and soil. These sources contributed to 11.8 per cent of the global emissions of the gas between 2010 and 2019.

— Agriculture activities and related waste generation, biomass burning, fossil fuels and industries together contributed to around six per cent of the global nitrous oxide emissions in 2010-2019, the study noted.

For Your Information:

— Balanced fertilisation — discouraging farmers from applying too much urea, di-ammonium phosphate (DAP) or muriate of potash (MOP), which only have primary nutrients in high concentrations — is likely to be a key policy goal for the government taking over after the Lok Sabha elections.

NO OUTCOME IN BONN MEETING: WHY MONEY IS KEY TO CLIMATE ACTION

A climate meeting in Bonn, Germany, has failed to make much headway on the crucial issue of defining a new climate finance goal. By the end of 2024, countries have to finalise a new sum of money — above the existing figure of $100 billion per year — that the developed world must mobilise for the developing countries to help them fight climate change.

The Bonn talks, an annual fixture in June, were expected to give at least some indicative numbers. They could have been worked upon before COP29 — scheduled to take place in Baku, Azerbaijan, in November — where they have to be finalised.

But this did not happen. All that came out was a 35-page, 428-paragraph, "input paper", which was a broad description of the wish lists of different countries. The lists pertained to not just the quantum of climate finance, but also other associated issues such as who should be contributing, what should this money be spent on, and how the finance flows should be monitored. The paper is likely to be developed into a formal negotiating draft that can be agreed upon at COP29.

HIGHWAY TO 'CLIMATE HELL': WHAT BREACHING THE 1.5 DEGREE CELSIUS WARMING THRESHOLD COULD MEAN

This May was the warmest May ever. In fact, each of the last 12 months have set a new warming record for that particular month, Europe's Copernicus Climate Change Service (C3S) said last week.

The average global temperature last month was 1.5 degree Celsius above the estimated May average for the 1850-1900 pre-industrial reference period. For the 12-month period (June 2023 – May 2024), the average temperature stood at 1.63 degree Celsius above the 1850-1900 average.

The World Meteorological Organization (WMO), in a separate report published on June 6, said there is now an 80% chance that at least one calendar year between 2024 and 2028 would see its average temperature exceed 1.5 degree Celsius above the pre-industrial levels — for the first time in history. Just a year ago, the WMO had predicted a 66% chance of the same.

Scary as these facts are, they do not imply that the world is about to breach the commonly talked about 1.5 degree Celsius temperature threshold. That threshold refers to a warming over a longer period, with usually a two or three decade average taken into consideration.

What is the 1.5 degree Celsius threshold?

In 2015, 195 countries signed the Paris Agreement, which pledged to limit global temperatures to "well below" 2 degree Celsius above pre-industrial levels by the end of the century. It also said countries would aim to curb warming within the safer 1.5 degree Celsius limit.

While the Agreement did not mention a particular pre-industrial period, climate scientists generally consider 1850 to 1900 as a baseline, since it is the earliest period with reliable, near-global measurements. Some anthropogenic global warming had already taken place at that time — the Industrial Revolution began in England in the mid-1700s. Nonetheless, a reliable baseline is crucial to measure the rising temperatures today.

Highway to 'climate hell' All data by ERA5

Why 1.5 degree Celsius?

The safer 1.5 degree Celsius limit was chosen based on a fact-finding report, which found that breaching the threshold could lead to "some regions and vulnerable ecosystems" facing high risks, over an extended, decades-long period.

The 1.5 degree Celsius was set as a "defence line", to ensure that the world avoids the disastrous and irreversible adverse effects of climate change which would begin to unfold once the average temperature increases by 2 degree Celsius above the pre-industrial levels. For some regions, even a smaller spike will be catastrophic.

What happens when threshold is breached?

The 1.5 degree Celsius threshold is not a light switch which, if turned on, would trigger a climate apocalypse. It is just that once this threshold is breached for a long period of time, the impact of climate change such as sea level rise, intense floods and droughts, and wildfires will significantly increase and accelerate.

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Speaking to MIT News, Sergey Paltsev, deputy director of the Massachusetts Institute of Technology's Joint Program on the Science and Policy of Global Change, said: "The science does not tell us that if, for example, the temperature increase is 1.51 degree Celsius, then it would definitely be the end of the world. Similarly, if the temperature stays at a 1.49 degree increase, it does not mean that we will eliminate all impacts of climate change. What is known: The lower the target for an increase in temperature, the lower the risks of climate impacts."

The world is already witnessing these consequences, to some extent. For instance, the severe heatwave over North and Central India in late May, which saw temperatures nearing 50 degree Celsius in Delhi and Rajasthan, was nearly 1.5 degree Celsius warmer than past heatwaves. The heatwave reportedly caused hundreds of deaths, and can be attributed to rising global temperatures.

In April, the US National Oceanic and Atmospheric Administration (NOAA) said the fourth global mass coral bleaching event has been triggered by extraordinarily high ocean temperatures. This could harm ocean life, and the lives of millions of people who rely on reefs for food, jobs, and coastal defence.

Last year, a report found that five major climate tipping points are already at risk of being crossed due to warming. Climate tipping points are critical thresholds beyond which a natural system can tip into an entirely different state. They cause irreversible damage to the planet, including more warming.

Scientists have identified a number of these tipping points across Earth, which fall into three broad categories: cryosphere (for example, melting of the Greenland ice sheet), ocean-atmosphere (change in water temperature), and biosphere (death of coral reefs), according to a report by the European Space Agency (ESA).

How can the world stay within the threshold?

2023 was the warmest calendar year ever recorded. The WMO reported that the average global temperature reached 1.45 degree Celsius above the pre-industrial levels. But the unusually high temperatures were also partly due to the onset of El Niño, an abnormal warming of surface waters in the equatorial Pacific Ocean. This weather pattern is known to lead to record-breaking surface and ocean temperatures in some parts of the world.

El Niño has now peaked and is likely to transition towards the cooler La Niña in the following months. Nonetheless, the world is most likely to temporarily breach the 1.5 degree Celsius limit in the next five years. Each year between 2024 and 2028 is predicted to be between 1.1 degree Celsius and 1.9 degree Celsius higher than the pre-industrial average, the recent WMO report found.

The only certain way of remaining under the threshold is to immediately, and radically, curb the emissions of heat-trapping greenhouse gases (GHG). To do this, the world needs to stop burning fossil fuels like coal, oil and gas, which release GHGs into the atmosphere. So far, countries have failed to make a significant dent in this regard.

In 2023, the levels of GHGs in the atmosphere reached historic highs. Carbon dioxide, which is the most abundant anthropogenically produced GHG, rose in 2023 by the third-highest amount in 65 years of recordkeeping, according to NOAA.

As UN Secretary-General António Guterres said on June 5: "We are playing Russian roulette with our planet… We need an exit ramp off the highway to climate hell, and the truth is we have control of the wheel."

UNDERSTAND THE INDIAN OCEAN AND YOU'LL UNDERSTAND MUCH ABOUT EARTH

World Oceans Day was on June 8. For the occasion, let's take in the wonders of the smallest of the three major oceans right in our front yard. The Indian Ocean has been getting a lot of attention recently for its rapid warming and the outsized influence it continues to have on its peers.

As it happens, the Indian Ocean is critical today to understand the earth's overall ocean response to increasing greenhouse gases and global warming.

Home to the deadliest storms

The Indian Ocean is famous for its dramatic monsoon winds and the bountiful rain it brings to the Indian subcontinent. The winds and the rain have evoked prose and poetry for millennia. More than a billion people depend on the moisture it supplies to quench their thirst, to replenish fisheries, and to produce food and energy.

The warm summer months are characterised by the rapid warming of the Arabian Sea and the Bay of Bengal as well as the southern tropical Indian Ocean. The winds begin to turn around from a land-to-ocean direction during winter to an ocean-to-land direction as summer commences.

The scorching heat on the subcontinent also comes with the threat of pre-monsoon cyclones. The North Indian Ocean doesn't generate as many cyclones as the Pacific or the Atlantic Oceans, but the numbers and their rapid intensification have been growing ominously. The relatively small North Indian Ocean ensures cyclones don't grow into the sort of hot powerhouses hurricanes and typhoons can be. But also the developing countries along the rim of South Asia, East Africa, and West Asia are sitting ducks in their path. Thus, cyclones tend to be the deadliest storms by mortality.

The warm ocean supports fisheries, big and small, and fish such as anchovies, mackerel, sardines, and tuna. Dolphins are a tourist attraction; some whales have also been sighted in the Arabian Sea. Tourists also flock to popular beaches and the corals from Lakshadweep to the Andaman-Nicobar Islands, all the way down to Reunion Island off Madagascar.

A unique configuration

The northern boundary of the Indian Ocean is closed off by the Asian landmass, minus tiny connections to the Persian Gulf and the Red Sea.

The southern Indian Ocean is also different from the other oceans thanks to two oceanic tunnels that connect it to the Pacific and the Southern Oceans.

Through the first tunnel — the Indonesian seas — the Pacific Ocean dumps up to 20 million cubic metres of water every second into the eastern Indian Ocean. These waters also transport a substantial amount of heat. They stay mostly in the top 500 m and move through the Indian Ocean towards Madagascar. The Pacific waters, called the Indonesian Throughflow, wander around the Indian Ocean and affect the circulation, temperature, and salinities.

The other tunnel connects the Indian Ocean to the Southern Ocean with two-way traffic. Colder, saltier and thus heavier waters flow into the Indian Ocean from the Southern Ocean below a depth of about 1 km. Due to the closed northern boundary, the waters slowly mix upward, and with the waters coming from the Pacific. The waters in the top 1 km eventually exit to the south.

The mix of heat and water masses in the Indian Ocean confer some mighty abilities to affect the uptake of heat in the world's oceans.

The little ocean that could

The Indian Ocean is a warm bathtub despite the underwater tunnels because it is heavily influenced by the Pacific Ocean through an atmospheric bridge as well. The atmospheric circulation, dominated by a massive centre of rainfall over the Maritime Continent, creates mostly sinking air over the Indian Ocean. The atmosphere also warms the Indian Ocean year after year.

The Indian Ocean thus gains heat that it must get rid of via the waters moving south. With global warming, the Pacific has been dumping some additional heat in the Indian Ocean. The cold water coming in from the Southern Ocean is also not as cold as before.

The net result: the Indian Ocean is among the fastest warming oceans, with dire consequences for heat waves and extreme rain over the Indian subcontinent. Marine heat waves are also a major concern now for corals and fisheries.

The warming Indian Ocean is affecting the wind circulation in a way that's also affecting the amount of heat the Pacific is able to take up. The Pacific Ocean takes up heat in its cold, eastern tropical region, and this is crucial to determine the rate of global warming. The Indian Ocean is thus playing a role in how well the Pacific can control global warming.

The other region where the ocean can draw down the heat and lock it away in deeper waters is in the North Atlantic. This is where surface waters become so dense that they sink like a rock into the depths. If the sinking of the water slows due to global warming — which seems to be the case — the heat doesn't sink away from the surface as quickly as it used to.

Indeed, researchers have found that the Indian Ocean's warming is actually helping accelerate the sinking of the heat, thus modulating global warming directly!

This is why, despite being the smallest tropical ocean, the Indian Ocean's influence has become impossible to understate. Recall that the oceans take up over 90% of the additional heat more greenhouse gases in the atmosphere are trapping.

A hand in human evolution

If this isn't wondrous enough, the reconfiguration of the Indian Ocean may have played a role in the evolution of our ancestors as well.

Until about three million years ago, Australia and New Guinea were well south of the equator and the Indian Ocean was directly connected to the Pacific Ocean. And this Indo-Pacific Ocean was in a warm state known as a 'permanent El Niño' — a state that was associated with permanently plentiful rain and lush green forests over East Africa. Today, this part of Africa is arid.

The northward drift of Australia and New Guinea, which is still ongoing, separated the Indian and the Pacific Oceans around three million years ago. As a result, the eastern Pacific Ocean became

cooler and the El Niño went from a permanent state to an episodic one, like the ones we've been seeing.

This transition aridified East Africa, turning its rainforests into grasslands and savannahs. Researchers have also hypothesised that these changes forced our ancestors, such as chimpanzees and gorillas, to move farther and run faster. In the rainforests, they had an abundance of food and hiding places and didn't have to.

If these hypotheses are borne out, it's possible the transformation also had a hand in the birth of bipedal movement — the ability to walk on two legs — which is much more efficient than moving on all four across larger distances.

The storied history of our neighbourhood ocean is thus a worthy thing to celebrate — and study — on World Oceans Day.

NEW PORTABLE ATOMIC CLOCK OFFERS VERY ACCURATE TIMEKEEPING AT SEA

Atomic clocks are the backbone of the Global Positioning System (GPS), the network of satellites above the earth that we use every day to navigate cities, respond to emergencies, and organise military operations, among other things.

Despite being one of the most accurate timekeeping methods, however, there is still room for improvement. Scientists today are pushing the boundaries with a new technology called optical atomic clocks.

But for being such sophisticated instruments, both these clocks are also bulky, power-hungry, fragile, and expensive. As a result, their installation and operations are often restricted to big research facilities.

A study recently published in the journal Nature introduced a kind of portable optical atomic clock that can be used onboard ships. While these devices traded some accuracy for size and robustness, they were still more accurate than other vessel-borne timekeeping options.

According to the researchers, this is the most performant optical clock based at sea and represents a significant advancement in optical timekeeping.

The working of an atomic clock

Atomic clocks work by keeping time using atoms. One popular design uses atoms of an isotope of caesium, Cs-133. The International Committee for Weights and Measures first used it in 1967 to define the duration of one second. India also uses a Cs-133 atomic clock to define the second for timekeeping within its borders.

Cs-133 is a highly stable atom and is found naturally, which is why it is so commonly used in atomic clocks.

Atomic clocks exploit a fundamental property of all atoms: their ability to jump between different energy levels. Energy levels are like the steps of a ladder. An atom climbs up the ladder by absorbing energy, like electromagnetic radiation.

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In a Cs atomic clock, the energy needed for the atom to jump to a higher energy level matches the frequency of microwave radiation. This frequency is related in some fully understood way to the duration of a second.

First, researchers keep the Cs atoms in a cavity, to which microwave radiation of a specific frequency is applied. When the frequency of this radiation matches the transition energy of the Cs atoms, the match-up is called a resonance.

The Cs-133 atoms absorb this radiation and jump to a higher energy level. This transition only happens when the frequency of the applied radiation is equal to 9,192,631,770 Hz.

Put another way, when the Cs-133 atom completes 9,192,631,770 oscillations between the two energy levels, one second will have passed.

The accuracy of atomic clocks comes from a feedback mechanism that detects any changes in the resonance frequency and adjusts the microwave radiation to maintain resonance.

Thus, a caesium atomic clock loses or gains a second every 1.4 million years.

Optical atomic clocks use lasers

Optical atomic clocks are even more accurate. While they have the same working principle, the resonance frequency here is in the optical range. Radiation in this range includes visible light (to humans) and ultraviolet and infrared radiation.

As part of an optical atomic clock, researchers use lasers to stimulate atomic transitions. The lasers' light is highly coherent: the emitted light waves all have the same frequency and their wavelengths are related to each other in a way that doesn't change. The result is light with more precise properties and great stability.

Optical atomic clocks use coherent light to achieve higher accuracy in two main ways.

The first is the higher operating frequency of atomic clocks. Say we have two clocks, A and B. A has a higher operating frequency than that of B — which means A will complete more oscillations than B in the same time.

As a result, A will be able measure smaller increments of time more accurately because it has more cycles to count within that time frame.

The second reason is that optical atomic clocks have much narrower linewidths. The linewidth is the range of frequencies over which the transition occurs. The narrower the linewidth, the easier it is to tune the frequency of the optical light that produces the resonance. This leads to higher accuracy because it enables more precise changes.

The most commonly used atom in optical atomic clocks is strontium (Sr): it has narrow linewidths and stable optical transitions.

Researchers at the Indian Institute of Science Education and Research, Pune, are working on a strontium optical atomic clock. Their peers at the Inter-University Centre for Astronomy and Astrophysics in the same city are developing a similar clock with ytterbium ions. These devices, once ready, will bring precision timekeeping in India to the optical regime.

Building a portable device

The researchers in the Nature study developed an optical atomic clock that uses molecular iodine as the frequency standard.

Atomic clocks are prized for their accuracy, losing or gaining just one second over 300 million years. Optical atomic clocks only lose or gain a second over 300 billion years.

The new iodine clock isn't as accurate as an optical atomic clock in the laboratory, trading it off for mobility and robustness. But it is still accurate enough to lose or gain a second only every 9.1 million years.

The development of such setups is a necessary first-step for their use for navigation, maritime communication, and scientific research. For example, they can now help monitor underwater seismic and volcanic activity with great precision. Onboard spacecraft, they can help scientists conduct experiments that test the theories of relativity and potentially reduce the cost of satellite-based navigation.

ELEPHANTS CALL EACH OTHER BY NAME, STUDY SUGGESTS

Could it be that elephants address each other by the equivalent of a name? A new study involving wild African savannah elephants in Kenya supports this idea.

The researchers analysed vocalisations — mostly rumbles generated by elephants using their vocal cords, similar to how people speak — made by more than 100 elephants in Amboseli National Park and Samburu National Reserve.

Using a machine-learning model, researchers identified what appeared to be a name-like component in these calls identifying a specific elephant as the intended addressee. The researchers then played audio for 17 elephants to test how they would respond to a call apparently addressed to them as well as to a call apparently addressed to some other elephant.

The elephants responded more strongly on average to calls apparently addressed to them. When they heard such a call, they tended to behave more enthusiastically, walk toward the audio source and make more vocalisations than when they heard one apparently meant for someone else.

The study's findings indicate elephants "address one another with something like a name", according to behavioural ecologist Mickey Pardo of Cornell University and formerly of Colorado State University, lead author of the study published on Monday in the journal Nature Ecology & Evolution.

"Certainly, in order to address one another in this way, elephants must learn to associate particular sounds with particular individuals and then use those sounds to get the attention of the individual in question, which requires sophisticated learning ability and understanding of social relationships," Dr. Pardo said.

"The fact that elephants address one another as individuals highlights the importance of social bonds — and specifically, maintaining many different social bonds — for these animals," he added.

Elephants are the planet's largest land animals and are highly intelligent. They are known for keen memory, their problem-solving skills, and sophisticated communication. Previous research has

shown that they engage in complicated behaviour — visual, acoustic, and tactile gestures — when greeting each other.

Why would an elephant call another elephant by "name"?

"We don't know exhaustively but from our analysis it appears commonly during contact calls where an elephant calls to another individual, often by name," said Colorado State University conservation biologist and study co-author George Wittemyer, chair of the scientific board of the conservation group Save the Elephants.

"It was also common among a mother's rumbles to her calves, often to calm them down or check in with them. We thought we would find it in greeting ceremonies, but it was less common in those types of vocalisations," Dr. Wittemyer added.

LOW-COST MRI MACHINE CAN IMPROVE ACCESS TO DIAGNOSTICS IN INDIA

Scientists have designed a magnetic resonance imaging (MRI) scanner that costs a fraction of existing machines, setting the stage for improving access to this widely used diagnostic tool.

A MRI helps visualise minute details in the human body, with which doctors can diagnose disorders and select treatments for the brain, the heart, various cancers, and orthopaedic conditions.

These scanners work by using strong magnetic fields, measured in units called tesla (T), and radio waves to generate images of internal organs. The strength of these magnetic fields in clinical MRI setups range between 1.5 T and 3 T — or 4-8-times stronger than the typical magnetic field in a sunspot on the Sun.

Around 50-times cheaper

This potentially life-saving medical technology remains inaccessible to most of the population, especially in low- and middle-income countries like India because of the scanner's high cost and the infrastructure required to handle such a powerful instrument. This includes shielding the room that houses the machine to contain the effects of strong magnets; liquid helium to cool the magnets when they heat up during operation; and the electric power required to operate the scanner.

"A 3-T MRI machine can cost anywhere between 9 and 13 crore rupees," Mukul Mutatkar, an interventional radiology consultant with several hospitals in Pune, said. "And that's just the machine. There are additional infrastructure costs."

To address this problem, a team led by Ed Wu at the University of Hong Kong designed and built an MRI machine using low strength magnets and store-bought hardware. This simplified machine costs around $22,000, or about Rs 18.4 lakh. The machine uses 0.05 T magnets and doesn't need a shielded room or helium coolant to operate. It can be plugged into standard wall-power outlets.

"This will usher in an entirely new class of MRI scanners that are affordable, low-power, and compact," Dr. Wu wrote in an email.

In the 1970s, researchers first used 0.05 T machines to generate images, but abandoned the option in favour of 1.5 T magnets in the 1980s. The stronger the magnetic field, the better the image

produced. A 1.5-T scanner can detect tissue damage as small as 1 mm whereas the smallest damage detectable at 0.05 T is 4 mm.

To compensate for lower detail, Dr. Wu & co. used a deep-learning algorithm. Trained on data from high-resolution images of human organs, it helped reduce background noise and obtain sharper images.

They tested their setup with 30 healthy adult volunteers and obtained clear images of brain tissue, spinal cord, cerebrospinal fluid, the liver, kidneys, and the spleen. They could also visualise details in the lungs and the heart, and knee structures such as cartilage. They found that the image quality of the 0.05-T machine coupled with AI produced was comparable to that of images obtained from a 3-T machine.

The research group wrote that their machine was also less noisy during operation, meaning it could be used with children as well.

TACKLING THE FATTY LIVER DISEASE EPIDEMIC

The theme for International Fatty Liver Day this year, an awareness initiative observed annually in June, is 'Act Now, Screen Today'. This theme resonates more urgently today than ever before. Liver diseases were predominantly associated with excessive alcohol use and this remains an important cause of advanced chronic liver disease. However, in recent years, we are seeing the emergence of a silently growing threat to liver health — non-alcoholic fatty liver disease. As our understanding of this condition has evolved, we now know that fatty liver is closely linked to metabolic health, cardiac health, and a risk for developing cancers. This disorder has now been appropriately reclassified and is known as 'Metabolic dysfunction-associated steatotic liver disease' (MASLD). It has also resulted in a paradigm shift in how we approach liver health. The key is to screen, test, and treat.

Growing burden

The trends in fatty liver disease prevalence are alarming. MASH (Metabolic dysfunction-associated steatohepatitis), a progressive form that causes liver inflammation and scarring, is expected to become the most common cause of chronic liver disease and the leading indication for liver transplantation. The global prevalence of MASLD is estimated at 25-30%. In 2022, a meta-analysis revealed that in India, among adults, the pooled prevalence of fatty liver was 38.6%, while among obese children, it was around 36%.

There is a close link between fatty liver disease and metabolic syndrome, including obesity, diabetes, high blood pressure, and abnormal cholesterol levels. Individuals with these conditions have high MASLD prevalence rates: 55.5%-59.7% for diabetes, 64.6%-95% for obesity, and 73% for severe metabolic syndrome. Consuming excessive carbohydrates, especially refined carbs and sugars, worsens these conditions by causing metabolic problems. When the body has too much glucose, it increases insulin production to help cells absorb the glucose. However, constantly eating too many carbs causes persistently high insulin levels, leading to insulin resistance, where cells become less responsive to insulin.

Insulin resistance disrupts normal metabolism and promotes the conversion of excess glucose into fatty acids, which are then stored in the liver. The liver cells fill up with fat, leading to fatty liver. Over time, this continuous damage affects the liver's ability to function properly, progressing

from simple fatty liver to more severe conditions like such as steatohepatitis and cirrhosis, which are hallmarks of MASLD, and may require a liver transplant.

Despite this growing burden of fatty liver disease, it often goes undetected as there is usually no warning or symptom in the early stages. Diagnosis is usually made at an advanced stage, often when significant liver damage has already occurred. The key to early diagnosis is simple — a comprehensive health screening that includes a thorough history, physical examination, blood tests, and an ultrasound of the abdomen. Physical examination will include height, weight, body mass index (BMI), abdominal girth, and waist-to-hip ratio to assess visceral fat, which is an important marker of metabolic health. Blood tests to cover cardio-metabolic risk factors include a blood count, sugar profile, blood lipid profile, liver function tests, and kidney tests. In a cohort of 50,000 people screened at Apollo Hospitals, amongst the 33% that had fatty liver, as observed using an ultrasound of the abdomen, only one in 3 had elevated liver enzymes in their blood test. An ultrasound of the abdomen is an important test to screen for liver disease and an important first step to diagnose fatty liver. It is often missed or not included in many health checks, largely because of the limited availability of radiologists as well as stringent regulatory approvals.

Advanced liver tests will include liver fibrosis assessment to look for liver scarring, most accurately done by using newer technologies such as vibration-controlled transient elastography. This is a simple non-invasive tool and it measures liver stiffness to assess early stages of liver fibrosis. It can also be used to regularly monitor the progression and responses to treatment. Together, these tools — ultrasound, comprehensive metabolic screening, and elastography — form an integrated approach to effectively detect and manage liver diseases at an early stage.

Personalisation is the key

The selection of screening tests and the frequency with which they are performed should be personalised. This decision should be based on factors including an individual's risk factors such as family history, lifestyle, and pre-existing health conditions. Clinicians should not make generic assumptions given the patient's age or physical markers alone as we are increasingly witnessing non-communicable diseases break traditional stereotypes and impact very diverse people, including children. Moreover, multiple factors affect liver health, necessitating integrated strategies that combine dietary modifications, regular physical activity, and effective weight management to mitigate liver disease risks.

The liver is a 'silent organ' that typically does not exhibit noticeable signs of damage until it reaches an advanced stage. It is important that we are aware of the impact our lifestyle choices make in the long run. We need to take active control of our health, be aware of what we consume, and go for frequent screenings because the groundwork for a happy life begins with good health.

FOUR NEW STUDIES REPORT PROGRESS TOWARDS LONG-AWAITED HIV VACCINE

In early 1981, Michael Gottlieb, an assistant professor at the University of California Los Angeles Medical Centre, wanted to teach some tenets of immunology to a post-doctoral fellow in his laboratory. Dr. Gottlieb asked the post-doc to select a patient from the hospital who displayed some immunological features that they might find interesting. The post-doc found a patient who had a relatively rare infection called pneumocystis pneumonia and had been admitted after sudden, unexplained weight loss.

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During the course of their discussion, the hospital doctors referred four more patients with the same infection. Dr. Gottlieb published a paper detailing these five cases in a small American journal called Morbidity and Mortality Weekly. At the time, Dr. Gottlieb had no idea his paper was about to change the field of immunology forever.

That paper was the first report of acquired immunodeficiency syndrome (AIDS).

No vaccine for AIDS

Today, nearly half a century after Dr. Gottleib's landmark publication, AIDS still has no vaccine or cure. This anomaly in humanity's otherwise remarkable track record in tackling major infectious diseases is a result of several factors. Chief among them is that the replication of the human immunodeficiency virus (HIV), which causes AIDS, is an incredibly error-prone process that results in multiple variants of the virus circulating.

The sheer number of all the different strains circulating in the world is in fact the biggest challenge to an HIV vaccine today.

To put it in perspective, HIV has more variants circulating in a single patient at any given point of time than influenza cumulatively generates in one year in all influenza patients around the world combined. And influenza is the second-best virus in terms of genetic variation.

Starring role for B-cells

When the immune system encounters a virus, one of its responses is to produce antibodies highly specific to proteins on the virions' surface. Each antibody is unique to a small piece of a given protein, and the immune system can generate antibodies against any given fragment of any protein.

The immune system does this by starting with a pool of specialised cells that produce antibodies, called B-cells. Each B-cell produces an antibody unique to one protein fragment. When a B-cell encounters a similar protein fragment on a foreign object — say, a virus or a bacteria — it begins to divide and refine the antibody until it binds perfectly to the target. These antibodies then bind to their corresponding pieces on the viral surface, rendering them incapable of further infection. The body then retains some of these specific antibody-producing cells in case of a future infection.

A vaccine aims to generate these antibodies prior to viral infection so that whenever a virus enters the body, the antibodies can neutralise the virus and prevent it from initiating an infection. The vaccine basically provides the immune system with a head-start by allowing the body to make antibodies without an infection with the real virus.

bNAb, a sliver of hope

However, when multiple variants of the same virus exist, generating antibodies against all the different variants simultaneously becomes very difficult. In the case of most viruses, the immune system ultimately does catch up. But against HIV, it doesn't because of the sheer volume of different variants that are circulating, overwhelming the immune system's ability to generate new antibodies. In fact, by the time the immune system makes antibodies against a few strains, the virus will have produced hundreds more.

In the early 1990s, scientists noticed that in a small subset of HIV-infected individuals, a new kind of antibody was being produced that could neutralise a large number of circulating viral strains.

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These broadly neutralising antibodies (bNAb) worked by targeting areas of the viral proteins that the virus couldn't afford to change, since doing so would make it lose infectivity. Scientists have since discovered many bNAbs, and they are classified into different groups based on the region of HIV they target. Some of these bNAbs can effectively neutralise more than 90% of circulating strains.

But there is a catch: a body usually takes years to make bNAbs, and by then, the virus has already evolved to escape them. It takes years because the parental B-cell that makes the bNAbs is incredibly rare in the starting pool.

Light at the tunnel's end?

The challenge, therefore, has been to make the immune system produce these bNAbs in large numbers in response to a vaccine. The route to doing this, called germline targeting, has three steps.

In the first step, those B-cells that can mature into cells that can produce bNAb are identified and engaged to increase their population and prepare them for the second-step, where a booster dose will guide these cells into generating stronger bNAbs against HIV. The third and final step is to refine these bNAbs such that they can neutralise a wide range of HIV strains.

After years of painstaking failures, researchers have established a possible roadmap for the first two steps of germline targeting for two groups of bNAbs. Four papers recently published in Science journals outlined two promising nanoparticle-based vaccine candidates: N332-GT5 and eOD-GT8. The teams, based out of the Scripps Research Institute and the Massachusetts Institute of Technology, both in the U.S., showed that using these novel vaccines, it may be possible to engage B-cells to make two different classes of bNAbs.

The teams demonstrated the efficacy of their vaccine candidates in two forms, protein and mRNA. The latter is important because mRNA vaccines are easy to develop and produce. In both cases, the antibodies generated in response to the vaccine were shown by structural analysis to bind to the HIV proteins in a manner similar to that of established bNAbs. Further, the groups also demonstrated the efficacy of their vaccine candidates in two different animal models, mice and macaques. These animals can now be used as model systems for future studies. The candidate vaccines are currently being evaluated in a phase-1 clinical trial to assess their performance in humans.

The research groups have also reported a possible candidate for step II of germline targeting. A protein fragment called g28v2 appears to be able to guide the cells into making bNAbs. Further research in this direction to evaluate its properties is ongoing.

HIV demands patience

While these four papers do imply progress in developing a B-cell based vaccine for HIV after decades of frustrating wait, we must refrain from celebrating too early. Results from mouse and macaque models don't always translate to positive results in the human system. The strategies reported by these publications do have enormous potential for vaccine development against other RNA viruses such as influenza, various coronaviruses, and hepatitis C — but our past failures have also taught us to remain sceptical with HIV until the very end.

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RAPID, DIAGNOSTIC TEST FOR UTIS MAY HELP STEM SUPER BUG CRISIS

This week, a prize was announced that is likely to have far-reaching implications in the world of health care. Despite its importance, most of the community is unaware of the event. The winner of the Longitude Prize is poised to spearhead a revolution in the field of infection management and global efforts to tackle antimicrobial resistance. The £8 million

(₹ 85 crore) Longitude Prize on Antimicrobial Resistance (AMR), first announced in 2014, revealed its winner at an event in London's Science Museum. The PA-100 AST System from Sysmex Astrego is a high-tech, transformative, rapid, point-of-care test for UTIs (Urinary Tract Infection).

Rational use of antibiotics — choosing the appropriate antibiotic for the correct patient at the optimal time — is fundamental to saving lives and combating the superbug crisis. Rapid diagnostics are poised to be crucial in this effort. The winner of the Longitude Prize is set to spearhead the list of emerging rapid diagnostic technologies in a transformative manner. The applications for the Longitude Prize bring hope, suggesting that through collective action, we can look forward to a future protected from the threats of antimicrobial resistance.

The crisis is imminent: Antibiotic-resistant infections killed nearly 1.3 million people globally in 2019 and are on course to cause 10 million deaths a year by 2050, outstripping cancer. The global economy may lose $ 4 trillion by 2030 and up to $ 100 trillion by 2050 due to the AMR crisis.

What does the prize mean?

Most advanced tests in medical practice today are PCR-based, but the PA-100 AST System from Sysmex Astrego has developed a transformative technology based on a phenotypic test. This test identifies the bacteria causing the urinary tract infection and performs antibiotic susceptibility testing (AST) to determine the effective antibiotic for the specific patient in under 45 minutes.

The test uses a single-use cartridge, the size of a smart phone. Less than half a millilitre of the urine is added to this cartridge. Bacteria in the urine are trapped in over 10,000 microfluidic traps in parallel arrays and exposed to five different antibiotics at five different concentrations. The cartridge is inserted into a reader instrument the size of a shoe box, where bacterial growth is monitored by phase-contrast imaging. The reader provides a report , "sensitive" or "resistant" for each antibiotic in 30-45 minutes. This supports doctors and health workers in their clinical decision making at the point of care, and opens up the significant possibility of previously "retired" first-line antibiotics coming back into use for the majority of patients. Accurate, rapid diagnosis of bacterial infections that helps doctors and health workers manage and target antibiotics, will slow the development and spread of antibiotic resistant infections, improve healthcare and potentially save millions of lives.

The test represents a huge advance over the current turnaround time of 2–3 days. The test will help doctors prescribe the right antibiotic at the right time, rather than waiting for 3 days and resorting to an empirical antibiotic prescription. The test can be performed in a doctor's clinic rather than sending the urine sample to a laboratory. When a patient with symptoms of a urinary infection visits a doctor, if the new technology is used , the doctor will know within 45 minutes ,whether the patient has urinary infection or not and if there is an infection for which antibiotics will work. The test is transformative, accurate, and affordable for patients worldwide.

Currently, there are two types of tests available to diagnose urinary infections.

The first one is the urine dipstick test that can be done as a point-of-care test. Point-of-care diagnostic tests are tests that can be performed in the clinic, emergency departments, hospital wards, or pharmacy counters, without the need to send the sample to a laboratory. The advantage of the dipstick is that results are available in a couple of minutes, which helps doctors decide whether to start antibiotics or not. Unfortunately, accuracy is not more than 50–60%. Even if the doctor carries out a dipstick despite its limitations, the test doesn't help the doctor choose the right antibiotic.

For this, the urine sample must be sent to the laboratory for culture. The culture results take a minimum of 2–3 days. But the doctor cannot wait 2–3 days to start an antibiotic. So, even if the doctor sends a urine sample for culture, they still have to start an antibiotic empirically, based on educated guesswork, before the culture results are ready. By this time, the patient has already completed a full or half course of antibiotics. Such blind antibiotic prescriptions are a major cause of the antibiotic resistance crisis, especially in countries like India. A transformative, rapid point-of-care diagnostic test that is accurate and affordable has the potential to revolutionise urinary tract infection treatment in India and worldwide. Currently urinary tract infection management in most cases is based on a 50/50 rationale. Only 50% of patients with symptoms of urinary infection have an actual infection, and the accuracy of a urine dipstick is 50–60%.

In India, every year, millions of patients with urinary tract infections visit doctors or pharmacies seeking treatment. These infections result in significant loss of life, burden the healthcare system, and have a socio-economic impact.

In 20–30% of sepsis patients, the infections originates from the urinary tract. Up to two in five people who develop severe sepsis will lose their lives. Hence, rapid and accurate point-of-care tests for urinary tract infection can save millions of lives worldwide, especially in India. The solution is a rapid, accurate, and affordable test that can help the doctor diagnose urinary infections accurately and provide information on the correct antibiotic that can cure the infection.

What is the Longitude Prize?

In 1714, the British government announced the Longitude Prize to solve the longitude problem, literally.

In the 18th century, thousands of ships were lost at sea because sailors couldn't determine the position of the ship at sea. If a ship doesn't know where it is, it risks being shipwrecked.

To determine the position of a ship, both latitude and longitude are needed. Latitude was easy to measure by observing the sun, moon, and stars, but longitude was a mystery.

The British government announced the Longitude Prize for an invention that helps calculate longitude. John Harrison, a watchmaker, invented an ingenious device that could calculate longitude perfectly and won the prize.

300 years after the first Longitude Prize, Britain launched a second Longitude Prize. The public was asked to vote for a major challenge that needed an immediate solution, such as global warming, food shortages, and water shortages. The public voted for Anti Microbial Resistance.

A £ 10 million Longitude Prize was announced in 2014. Of this, £ 2 million was awarded to various innovators to refine their technology. The final winner receives £ 8 million.

The Longitude Prize on AMR intends to incentivise the creation of new diagnostic tests that in a matter of minutes, can identify whether an infection is bacterial and, if so, the right antibiotic to prescribe to slow the spread of antibiotic resistant infections.

The goal is to replace the 2-3-day lab test process that doctors and patients must currently endure, and end "just in case" prescribing that is prevalent as a result, which promotes the development of antibiotic resistance.

INDIA-MADE TB DIAGNOSTICS TECH WINS ACCLAIM AT WORLD HEALTH ASSEMBLY

The Truenat platform, a rapid molecular test for the diagnosis of pulmonary, extrapulmonary, and rifampicin-resistant tuberculosis, that was developed in India, has been hailed for its role in combating TB and as a possible component of global healthcare solutions at the recently held 77th World Health Assembly in Geneva.

Developed by Goa-based Molbio, a point-of-care molecular diagnostics company, Truenat was first launched in 2017 and is a real-time quantitative micro-PCR system. It is a portable, battery-operated machine that can be deployed at labs, health centres, and in the field. Truenat delivers results from samples in less than an hour and can test for over 40 diseases. At the World Health Assembly (the decision-making body of the WHO), The Global Fund, which collaborates with the WHO to build stronger health systems across the globe, appreciated India's commitment to eliminating TB by creating mass awareness, and intensive monitoring programmes using digital technologies, a press release from Molbio said. The Global Fund noted that India's innovative initiatives in the TB programme such as the use of Truenat machines and handheld X-ray devices, designed for challenging operational environments, could serve as models for global emulation. Sriram Natarajan, CEO of Molbio, said recognition such as this was welcome, especially as Truenat has now entered global markets, with roughly 10,000 installations worldwide. "Countries that have begun to use Truenat have all reported significant improvements in case detection," he said. Mr. Nararajan said TrueNat is used at over 7,000 primary health centres and community health centres under the National TB Elimination Programme and is also being used at roughly 1,500 private labs in the country. At the Assembly, Union Health Secretary Apurva Chandra called upon The Global Fund to continue its support for the TB programme to strengthen the capacities of public health systems, according to a Press Information Bureau release. Early diagnosis and treatment are crucial to combating TB, which kills an estimated 480,000 Indians every year, or over 1,400 patients every day. The WHO reports over 10 million new cases of TB every year, and India alone accounts for 27% of the global TB burden.

SCIENTISTS BACK NEW ALZHEIMER'S DRUG: ITS BENEFITS VS RISKS

Donanemab, a new therapy for Alzheimer's disease developed by drug maker Eli Lilly, has received unanimous support from independent scientists advising the United States Food and Drug Administration (USFDA), bringing it a step closer to clinical use.

"The potential risks of donanemab, appropriately managed as instructed in labelling, are outweighed by the demonstrated benefits on the clinical endpoints in those with AD (Alzheimer's disease)," the FDA advisory committee said in a briefing document.

With two predecessors with a similar mechanism of action having been approved by the regulator, the convening of the advisory committee in March had come as a surprise to many, including the

company. In a statement, the company had said at the time: "It was unexpected to learn the FDA will convene an advisory committee at this stage in the review process."

How do the benefits of the drug stack up against its risks?

The drug is meant only for those in the early stages of Alzheimer's disease — those who have mild cognitive impairment or mild dementia. The drug shows significant clinically meaningful slowing of the disease — meaning a person on the drug retains their functions for a longer time.

Most ARIA events — amyloid-related imaging abnormalities such as brain bleeds and seizures — were found to be non-serious, and resolved or stabilised after discontinuation of therapy, according to the FDA document weighing the risks and benefits.

"The key risks can be mitigated through appropriate labeling and clinical monitoring, and further characterized through post-authorization studies… Overall, given the seriousness of AD and the limited options for disease-modifying treatments, donanemab provides a clinically meaningful treatment benefit for patients with AD," the document said.

What is donanemab, and how does it work?

Like the two other Alzheimer's drugs approved over the past three years, donanemab is a monoclonal antibody that targets depositions of amyloid beta proteins in the brain, one of the defining features of Alzheimer's disease.

The phase 3 study shows that donanemab slows down cognitive decline in early Alzheimer's patients by 35.1% at 76 weeks. The result was based on a study with 1,736 patients, of whom 860 received the infusion every four weeks till the amyloid beta plaque cleared.

The main adverse effect of the drug is swelling or bleeding in the brain, most of which is asymptomatic. The study showed that 24% participants given donanemab had brain swelling and 19.7% had brain bleeds. Three treatment related deaths were reported in the study.

Why is a breakthrough of this kind important?

Dr M V Padma Srivastava, Chairperson of Neurology at Paras Health, Gurugram, and former head of the department of neurology at AIIMS, Delhi said: "The world is getting older and the burden of diseases such as Alzheimer's is on the rise. Most countries around the world need drugs such as this. In developing countries with huge populations, the burden [of Alzheimer's] is likely to be higher."

An estimated 5.3 million people are currently living with dementia in India. Alzheimer's is one of the most common forms of dementia. This prevalence is likely to increase to 14 million by 2050.

Dr Srivastava, however, said that these "horrendously" expensive drugs need to be evaluated against the benefits that they bring. "While the treatment can give a few more good years to a person, should they sell their home to get the treatment? These things have to be decided," she said.

She agreed, however, that "it is a much-needed innovation and could pave the way for something better."

Why was the approval for the drug delayed?

Earlier this year, Eli Lilly was informed that the US regulator wanted to understand further the data relating to the therapy, including implications of the limited dosing protocol that was used.

During the trial, the therapy was stopped in patients who achieved a certain level of clearing of amyloid beta plaques, a deposition of the amyloid beta protein in the brain that is a hallmark of Alzheimer's. This limited dosing is one of the features that sets donanemab apart from the two other therapies approved in the category.

The additional scrutiny of the drug also came after a US congressional committee examined the approval process for the first drug, aducanumab, developed by Japanese and American companies Eisai and Biogen, and found it to be "rife with irregularities".

The committee found an unusually close collaboration with the drugmaker; and that approval was given even after the clinical trial was cancelled by the company after an independent report indicated that the drug was unlikely to effectively slow cognitive decline and functional impairment, and despite an expert panel's recommendation against it.

The second drug, lecanemab, also developed by Biogen, was greeted with cautious optimism by doctors. This is because it indeed demonstrated a slowing of cognitive decline with fewer side effects for a disease that does not have any effective treatment yet.

HOW MUCH VITAMIN D DO WE NEED AND HOW MUCH IS TOO MUCH? DO WE REALLY NEED SUPPLEMENTS?

Vitamin D is both a nutrient that we consume and a fat-soluble hormone that our bodies produce. It is required for the body's calcium and phosphate levels to be maintained and regulated. To maintain strong bones, teeth and muscles, these nutrients are necessary. Thus, a deficiency of vitamin D raises the chance of developing several chronic diseases. It can result in bone discomfort brought on by osteomalacia in adults and bone deformities such as rickets in children. However, vitamin D receptors are found in a large number of human organs and tissues, which suggest significant implications beyond just bone health.

Types and Sources of Vitamin D: Which one do you need?

Though certain foods have been fortified with vitamin D, very few of them actually contain vitamin D naturally. It is challenging to consume enough vitamin D through your diet. Therefore, some people need supplements. But which ones do you need? There are two types of vitamin D supplements: vitamin D2 or "pre-vitamin D" and vitamin D3. The term, "the sunshine vitamin," refers to both of these naturally occurring forms, which are created in the presence of ultraviolet-B (UVB) radiation from the sun. However, D3 is produced by animals, including humans, and D2 by plants and fungus.

The main natural source of vitamin D is the skin. However, cramped urban living blocks out most of the sunshine and forces people to spend most of their time indoors. The pigment (melanin) serves as a shade, limiting vitamin D production on the skin while reducing the harmful effects of sunlight, including skin cancer. Therefore, people with darker skin (more melanin) tend to have lower blood levels of vitamin D. Some food sources containing vitamin D include red meat, liver, egg yolk, oily fish (including salmon, sardines, herring and mackerel) and fortified meals (like some spreads and cereals).

How much Vitamin D do you actually need?

Most people can produce all the vitamin D they require from late March or early April to the end of September by getting enough sunlight on their skin and by eating a balanced diet. However, as the sun is not powerful enough to produce enough vitamin D during the rainy and winter seasons, one must obtain it from their food or by taking supplements. Everyone (including expectant and nursing mothers) should think about taking a daily supplement containing 10 micrograms of vitamin D during this time.

However, if one takes too many vitamin D supplements over time, there can be an accumulation of calcium in the body (hypercalcemia). The heart, kidneys, and bones may also be harmed by this. The majority of people only need 10 micrograms of vitamin D each day if they decide to take supplements.

A daily vitamin D intake of more than 100 micrograms (4,000 IU) may, however, be dangerous. This applies to all individuals, including those who are pregnant, nursing, elderly, and kids who are 11 to 17 years old. Children between the ages of 1-10 should consume no more than 50 micrograms (2,000 IU) per day. Under-12-month infants shouldn't consume more than 25 micrograms (1,000 IU) each day. You can buy vitamin D supplements or drops at most pharmacies and supermarkets. However, it is advisable that one must speak with their doctor before taking any supplements.

Is Vitamin D toxicity real?

Vitamin D toxicity or Hypervitaminosis D is a rare but potentially dangerous illness that develops when your body is exposed to too much vitamin D. It occurs not by diet or sun exposure but typically through high doses of vitamin D supplements. A build-up of calcium in your blood (hypercalcemia), which can result in nausea and frequent vomitting, weakness and frequent urination, is the main side effect of vitamin D toxicity. The most frequently observed clinical symptoms of Vitamin D toxicity also include confusion, apathy, stomach pain, polyuria, polydipsia and dehydration. In addition to this, calcium stones may form in the kidneys and bone discomfort may result from vitamin D toxicity. Although vitamin D toxicity is not reported from spending too much time in the sun, always remember to cover up or protect your skin if you're out for long to reduce the risk of skin cancer and skin damage.

Do South Asians really need Vitamin D supplements?

If you have a dark complexion, such as if you are of South-Asian, African, or African-Caribbean descent, you may have trouble consuming enough vitamin D solely from sunshine. India enjoys plenty of sunshine as it is a tropical country. The majority of Indians are presumed to have sufficient vitamin D levels because they reside in regions with year-round access to ample sunlight. However, contrary to all beliefs, vitamin D deficiency is a common problem in the country.

This is brought on by the dark skin complexion (increase in skin pigmentation which acts as a type of natural sunscreen), increased reliance on indoor activities, which limits exposure to sunshine, urbanisation, application of sunscreen products, and cultural customs, Indian dietary practices and reduced use of foods fortified with vitamin D. Majority of foods high in vitamin D come from animals and a majority of Indians are vegetarians. However, rural residents, who by virtue of their line of work receive adequate sun exposure, may also have low levels of vitamin D. This might be a result of their diet, which is heavy in phytate and low in calcium.

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Unfortunately, diet alone cannot provide enough vitamin D to meet the Recommended Dietary Allowance (RDA) for Indians as about 90 per cent of people today spend the majority of their time indoors. A comprehensive plan to fight vitamin D insufficiency would hence involve sufficient sun exposure, food changes, supplementation as needed, managing obesity and paying particular attention to people with darker skin tones.

FSSAI TAKES DOWN '100 PER CENT FRUIT JUICE' LABELS: HERE'S ALL YOU NEED TO KNOW ABOUT ADDED SUGAR

Anything with a "100 per cent fruit juice" label on packaged beverages is nothing but fruit concentrate diluted with water. That's why the Food Safety and Standards Authority of India (FSSAI) has ordered manufacturers to take down labels making tall claims from their products, saying they were misleading. Describing them as reconstituted juices, it said, "The major ingredient.... is actually water and the ingredient (fruit), for which the claim is being made, is only present in limited concentrations."

What are reconstituted juices?

These are manufactured by adding water to the concentrate or pulp extracted from a fruit and are heat-treated to kill microbes. "A whole fruit is usually made of 80 per cent water, the nutrients and fibres comprising the rest. A fruit concentrate is prepared by removing this water, so it is essentially concentrated nutrients. There is nothing wrong with that, it is healthy. However, when reconstituted with water, it is diluted further to make it look like the juice from many fruits. For example, you can get 50 ml of juice from an orange. But it can be used to create 100 or 200 ml of reconstituted juice," says Ritika Samaddar, regional head, Department of Clinical Nutrition and Dietetics, Max Healthcare.

Besides the dilution, the reconstituted juice uses colouring agents and additives for flavour and aroma to mimic natural juices.

What's the health impact of having packaged juices?

Usually, packaged juices use high fructose corn syrup in small quantities that do not need to be declared on the label as per norms. "The syrup may be in negligible amounts but the added sugar in it has been linked to conditions such as fatty liver, obesity, insulin resistance and high triglyceride levels. Consume a whole fruit at best or pulp the fruit in a juicer at home instead of falling for one that is available in the market," says Samaddar. Juices lose the fibres and even some nutrients of the raw fruit. If you eat the whole fruit, you might be eating only one or two oranges a day, but as a juice you could be having five or six oranges.

What happens if children consume these juices?

Dr Karunesh Kumar, senior consultant of paediatric gastroenterology at Indraprastha Apollo Hospitals, Delhi, strictly advises against packaged juice in early childhood to negate sugar dependency. "Parents give these to their children instead of carbonated sodas. But given their added sugar, they should not be given to toddlers, overweight or obese children. This is because consuming foods and beverages with high salt or sugar content at a very young age will prompt them to eat similar foods later in life," he says.

Besides, sugary juices can trigger gastrointestinal problems like bloating and diarrhoea. "Some toddlers develop false diarrhoea — where they pass partially formed stool several times a day," says Dr Kumar.

What do the FSSAI directives say?

The FSSAI has asked food manufacturers to exhaust already printed labels by September 1. Now they have to label products as "sweetened juice" if they contain more than 15 gm/kg of nutritive sweeteners, be they sugar, jaggery or corn syrup. Products made with non-nutritive sweeteners — products such as aspartame that cannot be processed by the body and hence do not add calories to a drink — are exempt from this.