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## INTERNATIONAL

### EXPRESS VIEW ON CASTE IN CALIFORNIA

For many in the diaspora and even in India, California is the shiny site of the “American dream”. Among the richest states in the US, it is home to Silicon Valley and the tech industry and has witnessed the rise of aspirational figures like Alphabet CEO Sundar Pichai, Satya Nadella at Microsoft, et al. But the state has pioneered more than start-ups that became unicorns. It has also been at the forefront of some of the most progressive legislation in the US including on pollution control, LGBTQIA+ rights and racial discrimination. Earlier this week, the California legislature passed SB-403, which amends extant disability legislation to make “ancestry” and caste-based discrimination illegal. It is the first US state to do so. While no form of discrimination — especially one as complex as caste — can be legislated away, the law is certainly a step forward.

Earlier this year, Seattle became the first city to recognise caste discrimination and in 2020, Cisco was sued by the state because two Indian managers allegedly discriminated against a Dalit engineer. Universities as well as the Democratic Party have taken cognisance of caste. The law, then, is not merely a top-down imposition but both a part and consequence of a larger churning. Long seen as a “model minority”, South Asians have been among the communities that have benefited from affirmative action, the push for diversity and America’s larger reckoning with ideas of social justice. Many Indian-Americans carry their culture, religion and beliefs with them. Most may even want to discard the burden of caste in “the land of the free”. Yet, some have carried prejudice with them too. If they act in an exclusionary manner, should they not face consequences? To label a move to address discrimination as “Hinduphobia” does disservice to both religion and ideas of natural justice.

Like every religious tradition, Hinduism has its warts — the treatment of the so-called “lower castes” has been chief among them. In India, attempts have been made to address them through reservation, broader conversations and stringent anti-discrimination laws, including the SC/ST Atrocities Act. The confrontation with this legacy of inequality is ongoing and few would argue that either the country or religion is worse for it. In fact, that there are enough Indian migrants in the US with the means and courage to raise their voices against discrimination is to be welcomed. After all, if the Indian-American dream is merely financial, unwilling to confront its own demons, it is a fragile one.

### UKRAINE WAR: THE ISSUES WITH RUSSIA’S ARMS PURCHASES FROM NORTH KOREA

U.S. national security council official John Kirby noted on August 30 that arms transfer negotiations between North Korea and Russia are “actively advancing” as the Russian president, Vladimir Putin, seeks to feed his war machine.

Under an array of western-led sanctions, Russia and its military contractor, the Wagner Group, have already allegedly turned to Pyongyang for artillery shells and what has been reported as “infantry rockets and missiles” in the past year.

While these sales and a flourishing business relationship with North Korea may have an important impact on the battlefields of Ukraine, my research on North Korea’s arms trading and procurement networks suggests that the Democratic People’s Republic of Korea (DPRK) is likely to seek technology from Russia in exchange. This would be a huge boost to the DPRK’s weapons



programmes and, at the same time, greatly to the detriment of the UN sanctions regime that seeks to limit those programmes.

## WHAT'S AT STAKE WHEN TURKEY'S LEADER MEETS PUTIN IN A BID TO REESTABLISH THE BLACK SEA GRAIN DEAL

Turkish President Recep Tayyip Erdogan will meet with Vladimir Putin on Monday, hoping to persuade the Russian leader to rejoin the Black Sea grain deal that Moscow broke off from in July. Here are some key things to know and what's at stake.

### WHERE WILL THE TALKS BE HELD?

The meeting in Sochi on Russia's southern coast comes after weeks of speculation about when and where the two leaders might meet. Erdogan previously said that Putin would travel to Turkey in August.

### WHY DID RUSSIA LEAVE THE GRAIN DEAL?

The Kremlin refused to renew the grain agreement six weeks ago. The deal — brokered by the United Nations and Turkey in July 2022 — had allowed nearly 33 million metric tons (36 million tons) of grain and other commodities to leave three Ukrainian ports safely despite Russia's war. However, Russia pulled out after claiming that a parallel deal promising to remove obstacles to Russian exports of food and fertilizer hadn't been honoured.

Moscow complained that restrictions on shipping and insurance hampered its agricultural trade, even though it has shipped record amounts of wheat since last year.

### WHY IS TURKEY A BROKER?

Since Putin withdrew from the initiative, Erdogan has repeatedly pledged to renew arrangements that helped avoid a food crisis in parts of Africa, the Middle East and Asia.

Ukraine and Russia are major suppliers of wheat, barley, sunflower oil and other goods that developing nations rely on. The Turkish president has maintained close ties to Putin during the 18-month war in Ukraine. Turkey hasn't joined Western sanctions against Russia following its invasion, emerging as a main trading partner and logistical hub for Russia's overseas trade.

NATO member Turkey, however, has also supported Ukraine, sending arms, meeting Ukrainian President Volodymyr Zelenskyy and backing Kyiv's bid to join NATO.

## COUP IN GABON

In July, when the pro-western regime of President Mohamed Bazoum was toppled in Niger in a military coup, regional powers and the West took a tough position against the putschists — an ultimatum to restore democracy in the West African country. Several countries in Africa, including Sudan, Mali, Burkina Faso and Guinea, have witnessed coups in recent months and the ease with which the generals have seized power in all these countries has set a dangerous trend across the continent. But the new rulers of Niger dismissed the western ultimatum. Within a month, another regime in Africa was toppled — this time, resource-rich Gabon. In the case of Mali, Burkina Faso and Niger, all affected by Islamist militancy, the military promised better security and economic opportunities and managed to consolidate power rather quickly. In Gabon, the Republican Guard,



a unit of the armed forces whose job was to protect the President, moved to seize power after the incumbent, Ali Bongo, was declared the winner of a disputed election. Mr. Bongo, who came to power in 2009, was a close French ally like his father Omar Bongo, who ruled the country for nearly 42 years. Ali Bongo's attempts to preserve the oil-rich country's reserve forests, which cover 90% of Gabon, earned him international applause, but at home, he never managed to fill his father's shoes.

Gabon, an OPEC member, is one of the richest countries of Africa in terms of per-capita income. Yet, over a third of its 2.4 million people live in poverty, and 40% of those between 15 and 24 years are unemployed, according to the World Bank. When Omar Bongo was in power, the regime got French protection in return for business favours. But Ali Bongo's regime came under systemic pressure, with the Opposition demanding free and fair elections and economic equity. The military, probably emboldened by the successful coups elsewhere in the continent, seized on public resentment. Following the coup announcement, thousands were in the streets of Libreville celebrating. Whether the putschists had public support or not, these coups speak of two major trends in Africa. First, traditional regimes are coming under increased pressure from within and a generation of risk-taking generals are making swift moves to grab power. This could turn out to be a transborder threat to elections, regime stability and order. Second, the coups also reflect the continent's changing geopolitical dynamics. All these countries were former French colonies. In Mali and Burkina Faso, the Russians have expanded their reach after the coup. Gabon has already replaced France with China as its most important trading partner. And the western calls upon the putschists to go back to the barracks have predictably fallen on deaf ears.

## RESTORING ORDER

The 10-member Association of Southeast Asian Nations (ASEAN) has finally shown the courage to call out the junta in Myanmar for the ongoing violence and its failure in implementing the Five-Point Consensus that was reached between the two sides, aimed at addressing the post-coup crisis in the country. Myanmar has seen a security and economic decline ever since the military ousted the democratically elected government of Aung San Suu Kyi in February 2021. Under the ASEAN plan, reached in April 2021, the junta had promised to stop the violence and start inclusive political dialogue, but has continued violating the consensus. ASEAN kept pushing the generals, but stopped short of antagonising them. However, the latest statement from ASEAN, issued after its annual summit in Jakarta, suggests a hardening of its stand. It has "strongly condemned" the continued acts of violence, and directly urged the "armed forces in particular and all related parties concerned... to ... stop targeted attacks on civilians". The grouping has also decided to deny Myanmar the bloc's chairmanship, which it was to assume in 2026. The Philippines will now take over, as the chairmanship goes in alphabetical order, and Myanmar will have a long wait ahead.

The military, unlike earlier when it saw opposition from democratic forces, is now facing enhanced pressure following the civil war. The political opposition has formed a National Unity Government (NUG) with a military wing that has joined hands with some ethnic separatist groups, thus posing a challenge to the junta. The military is still in control of most of the population centres, but at a huge cost. A recent report by United Nations investigators has said that the military regime has been committing war crimes, that include mass executions and sexual violence. More than two years of conflict have left about 18 million people in need of humanitarian assistance, and displaced two million. The military has also killed thousands in indiscriminate attacks on rebels and civilians. But despite this disproportionate use of violence, the regime has been unable to stifle dissent. In August, the military drew condemnation from the UN Security



Council over “unrelenting violence”. Now, with the ASEAN move, it is evident that the regime stands isolated, while the domestic situation remains untenable. It is not clear whether a tough stance by ASEAN will have any immediate meaningful impact on the regime’s behaviour. But the bloc, which has leverage over the country, should continue to push the generals to end the violence and start talks. The only solution to the multiple crises Myanmar is facing is the restoration of a legitimate, responsible and responsive regime.

#### HASINA’S DAUGHTER, NEPAL WHO VETERAN VIE FOR INDIA’S VOTE

India faces a tough choice as close neighbours Nepal and Bangladesh have both decided to nominate candidates for the post of Regional Director of the World Health Organization (WHO). The election will also come up for discussion on the sidelines of the G-20 Summit this weekend. The candidates include Bangladesh Prime Minister Sheikh Hasina’s daughter Saima Wazed, who is going head-to-head with one of the WHO’s senior-most officials, Shambhu Prasad Acharya, who is from Nepal. The election of the WHO South East Asia Regional Office (SEARO) Director will be held in New Delhi during a closed-door session from October 30 to November 2.

The winner will be declared based on the majority of votes from 11 members — Bangladesh, Bhutan, North Korea, India, Indonesia, the Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste. India’s Poonam Khetrpal Singh has held the SEARO Director’s post since 2014.

#### ‘Still some time’

Asked about India’s position, government officials said there was “still some time” before a decision would be made on whether to support Ms. Wazed or Mr. Acharya for the post, but indicated that the Bangladesh candidate had an “edge”, given the importance of the India-Bangladesh relationship, as well as Prime Minister Hasina’s backing for the candidate. However, officials conceded that as in any election within the UN system, much will depend on each SEARO member country’s negotiations with Bangladesh and Nepal, as they work on a system of reciprocity, in return garnering support on some other UN vote for themselves.

While Mr. Acharya, who is currently the Director, Country Strategy and Support for WHO Director-General Tedros Ghebreyesus and based at the WHO’s Geneva headquarters, is seen as an insider with considerable experience in the role, Ms. Wazed, who is a psychologist by training and an adviser to the Bangladesh government, is running a high-powered diplomatic campaign, and sources said she will accompany Ms. Hasina on her visit to Delhi, where Bangladesh is among the G-20 special invitees.

Meanwhile, Mr. Ghebreyesus will also be in Delhi for the event, along with a big WHO delegation, who are understood to be favouring their colleague, Mr. Acharya, for the role. Both sides are expected to actively campaign with SEARO members, as well as with those countries who have influence in the region.

#### UNDERSTANDING LAÏCITÉ, THE FRENCH PRINCIPLE OF SECULARISM

Recently, the French government announced that the practice of wearing abaya would be banned in state-run schools as it violated the principle of Laïcité, which is the French idea of secularism. The education minister said, “When you walk into a classroom, you shouldn’t be able to identify the pupils’ religion just by looking at them. Secularism means the freedom to emancipate oneself



through school.” He described the abaya as a “religious gesture, aimed at testing the resistance of the republic towards the secular sanctuary that school must be.”

The move was met with criticism by many. Some said that this amounts to a policing of teenagers’ clothing (public schools in France do not have a uniform). Some said that it was an attack on freedom and women’s bodies. Others said that this was yet another instance of Laïcité being used as a tool of oppression rather than assimilation.

### **The meaning of Laïcité**

Coined in the 19th century, Laïcité is a complicated and politically charged term. It is understood as a formal separation of the State and Church. It involves the complete removal of religious values from the public sphere and their replacement with secular values such as liberty, equality, and fraternity. The underlying goal of Laïcité is to implant tolerance and assimilate people. As per the principle, religion is to be confined to the private sphere. It is important to note here that the state plays an important role in ensuring that affairs are run according to the principle of Laïcité.

Laïcité, a product of the struggle of anti-clerical Republicans against the power of the Catholic Church, was an abstract idea following the French Revolution in 1789. It took a concrete shape in the form of The Law of 1905 in the Third Republic when state-run secular schools were established. The Law of 1905 guarantees freedom of conscience and freedom of worship except when it clashes with public order. It states that the Republic would neither pay for nor subsidise any form of worship. Today, while there are publicly funded Catholic schools in France, most children attend public schools which are secular spaces and free of cost.

### **Change in demographics**

Laïcité was not seen as problematic for the most part of the 20th century because France was largely homogenous. In the 1950s and 1960s, however, there was large-scale decolonisation in North Africa, which led to an influx of immigrants from predominantly Muslim countries such as Tunisia, Morocco, and Algeria. The change in demographics caused episodic tensions.

The incident that particularly rattled France and drew extensive press coverage was in 1989 when three Muslim girls, who refused to remove their head scarves in class, were expelled from their school in the town of Creil, about 48 kilometres from Paris. The headmaster claimed that he was enforcing Laïcité. Muslim leaders as well as Catholic leaders decried the move, arguing that Laïcité meant respect for and tolerance of religious differences among students. The confusion over the term was clear, for the incident was both condoned and opposed in the name of Laïcité. In November that year, the Supreme Court ruled that the headscarf was not incompatible with the principle of Laïcité.

This incident, in particular, brought Islam to the centre of the debate. Over the next few decades, global developments, such as the 9/11 attack and the invasion of Afghanistan by the U.S., and domestic ones, such as the rise of the National Front, which was avowedly anti-immigration; the shooting of journalists at Charlie Hebdo; and the killing of three people at a church in the city of Nice all contributed to this and arguably led to anti-Muslim sentiment.

Following the recommendation of the Stasi Commission, which was set up to reflect upon the application of the Laïcité principle, France passed a law in 2004 prohibiting the wearing of “ostentatious” symbols that have a clear religious meaning, such as a Catholic dress, a Jewish kippah, or a Muslim headscarf, in public spaces. In 2011, France banned the wearing of face-



covering veils in public places. Every such controversial decision of the French state in the name of Laïcité has led to new interpretations of the principle. Although Laïcité applies to all religions — there was a row in 2012 when a Sikh man was asked to remove his turban for an official photograph — the debate has increasingly moved to Muslim practices in the last few decades.

In 2015, a Muslim girl in France was banned from class for wearing a long black skirt that was seen as “too openly religious” despite the 2004 law allowing for “discreet religious practices” and the girl arguing that it was not a “religious sign.” In 2018, there was an outcry when a student wore a headscarf during a television interview in her university campus even though this is not illegal in France (headscarves are allowed in universities since students are adults). In 2020, following the beheading of a school teacher for showing cartoons depicting Prophet Mohammed, French President Emmanuel Macron banned homeschooling for children over three years old and asked Muslim leaders to agree to a “charter of republic values” as part of a broad clampdown on radical Islam. Long garments like abayas have been seen as a grey area so far, since Muslim groups have said that an abaya is not “required religious attire” but is in fact a fashionable garment tied to Arab culture. These incidents have led to the belief that promoting discrimination against Muslims has become acceptable under the guise of Laïcité.

#### **A different approach?**

Yet, despite efforts to ensure secularism, 36% of French people said in a survey in 2022 that they believe that secularism was “rather not sufficiently” being defended in France, while 21% said it was “not at all” being defended.

The question now is whether Laïcité actually helps people integrate into society or whether it is being used as a tool to oppress communities. Do people have to give up their own traditions and practices in order to assimilate (Mr. Macron said there was a need to “free Islam in France from foreign influences” and build an “Islam of Enlightenment”)? Or should France let religious identities “dissolve into more diversified practices and identities” (Roy, 2005; translated by Yolande Jansen) in order to ensure integration, which would be a challenge to the principle of Laïcité itself?

Mr. Macron said, “A united France is cemented by Laïcité.” Yet, there is some concern that a tool to prevent social fissures and promote universalism may, in fact, cause more fractures if there is a rigid, unyielding commitment to it.



## NATION

### EXPRESS VIEW ON MODI-BIDEN MEETING: AN EXPANSIVE AGENDA

A second meeting in less than three months between Prime Minister Narendra Modi and US President Joe Biden — on the margins of the G-20 summit in Delhi — augurs well for intensifying the strategic partnership between the two countries. If the plans for a Quad summit around the Republic Day celebrations in January 2024 are an indication, Biden might be back in Delhi along with Australian Prime Minister Anthony Albanese and Japanese Prime Minister Fumio Kishida. Never before in the history of India's relations with the United States has there been such an intense and sustained high-level political interaction between the two nations as is unfolding today. To be sure, both the Republicans and Democrats in Washington wooed India since the turn of the millennium and pushed ties on an upward trajectory. The Biden Administration, however, brought a scorching pace and ambitious purpose to the partnership within weeks of taking charge in Washington. It elevated the Quad to summit level and widened the scope of bilateral engagement. In Delhi, Modi nudged the Indian establishment to drop its "historic hesitations" in building productive relations with the US.

The results of the new and mutually reinforcing political will in Delhi and Washington saw the unveiling of an expansive agenda of strategic cooperation when Modi visited Washington in June this year. The deliberations covered bilateral, unilateral, and multilateral domains. There was a special focus on defence and advanced technology cooperation. Modi's bilateral meeting with Biden on Friday will allow the two leaders to review the implementation of the agreements and push the two bureaucracies to get on with it. With India and the US headed into a new electoral cycle, time is of the essence in turning the expansive mutual commitments identified in Washington into concrete outcomes.

Beyond stock-taking, the talks between Modi and Biden must bring some specific issues into focus. One is to inject life into the moribund nuclear deal unveiled during 2005-08. The UPA government, which made heavy weather out of a hugely beneficial agreement, dropped the ball on the Nuclear Liability Act, whose self-defeating propositions prevented significant US and foreign investment in building new atomic power plants in India. Modi and Biden agree on the importance of nuclear power in mitigating the dangers of climate change. Delhi wants to revive its nuclear power programme, and Washington is eager to participate in its expansion. There is also the possibility that the two sides could collaborate in building a new generation of small and modular reactors in India and export them to other countries. To get there, though, Delhi must find a way to fix the problems with the Nuclear Liability Act. To inject new life into India's atomic programme, Delhi must also consider privatising some elements of its civil nuclear programme. The results from the Modi government's partial privatisation of the space programme and the defence sector have been encouraging. A similar approach in the atomic domain could allow India to reclaim its leadership of the global nuclear industry that it had ceded to South Korea and China.

### INDIA DROPS TARIFFS ON U.S. LENTILS, ALMONDS AHEAD OF BIDEN'S VISIT

Two days before U.S. President Joe Biden arrives in New Delhi for a bilateral meeting and the G-20 Summit, India has dropped the retaliatory customs tariffs it had imposed on imports of some American goods such as almonds and lentils, effective September 6.





India raised import duties on 28 products from the U.S. in June 2019, after the latter had increased its customs duties on certain steel and aluminium products. In a notification issued on September 5, the Finance Ministry dropped some of these tariff increases “on being satisfied that it is necessary in the public interest so to do”.

During his state visit to the U.S. in June, Prime Minister Narendra Modi and the Biden administration had agreed to resolve six bilateral trade disputes that were pending at the World Trade Organization and unwind the tariff hikes imposed on some U.S. products, including walnuts, almonds, and apples. The Almond Board of California (ABC) welcomed the move in a statement, noting that the import duties on their almond shipments to India will now go back to ₹35 a kg on in-shell and ₹100 a kg of kernels. India had raised the applied tariff rates on U.S. almonds to ₹41 a kg on in-shell and ₹120 a kg on kernels.

## EASTERN HEDGE

Prime Minister Narendra Modi’s whistle-stop summit sojourn to the Indonesian capital of Jakarta earlier this week was primarily aimed at deepening India’s engagement with the economically significant grouping of 10 Southeast Asian nations. Coming on the eve of India’s hosting of the G-20 summit in New Delhi as the current holder of the bloc’s presidency, Mr. Modi’s presence at the annual ASEAN-India summit was an opportunity to cement traditional ties with the neighbouring Asian economies at a time of heightened global trade uncertainty. As the trade facilitation body UNCTAD noted in its June 21 ‘Global Trade Update’, the ‘outlook for global trade in the second half of 2023 is pessimistic as negative factors’ including downgraded world economic forecasts, persistent inflation, financial vulnerabilities and geopolitical tensions dominate. Against this backdrop, the joint leaders’ statement on ‘Strengthening Food Security and Nutrition in Response to Crises’ at the ASEAN-India summit underscores the shared vulnerability the region perceives in the face of the ongoing heightened global food insecurity, which has been exacerbated by the war in Ukraine, climate change and national policy responses to inflationary pressures. India’s recent curbs on export of rice have triggered some alarm, with the prices of the regional staple reportedly nearing a 15-year high. The onset of an El Niño, which is historically associated with disruptive weather events, queers the ground further, and ASEAN leaders are justifiably wary.

Mr. Modi’s pitch, laying stress on the need for a rules-based post-COVID-19 world order and a free and open Indo-Pacific, was clearly directed at members among the Asian bloc who are increasingly disquieted by China’s recent muscle flexing and claims over the South China Sea. The Prime Minister’s not-so-veiled message to the ASEAN members is that India is a more reliable long-term strategic and economic partner, which has no territorial ambitions that could discomfit them. India also sought to position itself as a voice to amplify the concerns of the Global South, stressing that it would be mutually beneficial for all. For India, grappling as it is with an underwhelming free trade agreement (FTA) with the 10-nation grouping, trade ties with the eastern economies have grown in volume but asymmetrically, with imports far outpacing the country’s exports. The widening trade deficit and the perception that Chinese goods are taking advantage of lower tariffs under the FTA to find their way into the Indian market, have among other factors precipitated a review of the pact that is likely to be completed in 2025. In the meantime, India needs to stay closely engaged with the ASEAN members both as a trade hedge against the slowdown in its main western markets and to highlight its significance as an all-weather ally.



## G20 SUMMIT IN DELHI: EVERYTHING YOU NEED TO KNOW

Leaders from the most powerful nations in the world are flocking to New Delhi for the G20 Heads of State and Government Summit to be held on September 9-10.

The culmination of India's year-long presidency of the G20, the summit will be concluded with the adoption of a G20 Leaders' Declaration, which will state the participating leaders' commitment towards the priorities discussed and agreed upon during the respective ministerial and working group meetings (more on that later).

Here is everything you need to know about the G20 – from why the group came into existence and what exactly it does, to the specifics of the Summit that New Delhi is set to host.

### **What is the G20 and what does it do?**

The G20, or the Group of Twenty, comprises 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, and the United States) and the European Union.

These members represent around 85 per cent of the global GDP, over 75 per cent of global trade, and about two-thirds of the world population. As a forum for international economic cooperation, it plays an important role in shaping and strengthening global architecture and governance on all major international economic issues. Some of its major objectives are as follows:

1. Policy coordination between its members in order to achieve global economic stability, sustainable growth;
2. To promote financial regulations that reduce risks and prevent future financial crises; and
3. To create a new international financial architecture.

### **When did the G20 come into being? Why?**

The Soviet Union fell in 1991, bringing an end to the Cold War. At the same time, vibrant economies were emerging in the Global South, in countries such as Brazil, China and India. It was in this context that a need for reform emerged in global governance and international institutions. Simply put, existing fora such as the G7, or international organisations such as the World Bank, were incapable of handling crises in the emergent global order.

In 1997, the Asian financial crisis ripped through some of the fastest-growing economies in East Asia. It soon spread to Latin America. It was in the context of this crisis that the G22, G20's earliest iteration, was set up in 1998. While initially conceived as a one-time crisis-response meeting, in early 1999, two more meetings were convened including 33 members (G33) to discuss reforms of the global economy and the international financial system.

It was in late 1999 that the G20, with its current composition, was finally founded as an informal forum for Finance Ministers and Central Bank Governors of its members to meet annually.

### **When did the G20 Leaders' Summit begin? Why?**

Between 1999 and 2008, the G20 operated mostly outside the public eye. While annual meetings were held, they were not the big deal they are today. The global financial crisis of 2008 would, however, catapult G20 to its present status. As the world reeled from the greatest economic crisis



to hit since the Great Depression (1929-39), France, which held the EU presidency at the time, argued for an emergency summit meeting to address the crisis.

But whom to invite? The G8 (comprising Canada, France, Germany, Italy, Japan, Russia, the UK and the US) was not sufficiently influential on its own to stabilise a crisis on this scale. Typically, diplomats would deliberate for months to decide which countries to call, but amid the ongoing crisis, there was simply no time. The G20 was the obvious answer.

The first G20 Leaders' Summit (the 'Summit on Financial Markets and the World Economy') was convened in Washington DC in November 2008. In addition to the leaders of its 20 members, the heads of the IMF, the World Bank and the United Nations were invited, along with Spain and the Netherlands. Annual summits have been held ever since.

#### **How does the G20 work?**

It is important to note that the G20 is an informal grouping. This means that unlike the United Nations (UN), it does not have a permanent secretariat or staff. Rather, the G20 presidency rotates annually among the members and is responsible for bringing together the G20 agenda, organising its workings and hosting summits.

The presidency is supported by the "troika" – previous, current and incoming presidencies. India holds the presidency from December 1, 2022, to November 30, 2023, with the troika comprising Indonesia (the previous presidency), India, and Brazil (the incoming presidency).

The G20 is also informal in another sense – while the decisions of the G20 are important, they do not get implemented automatically. Rather, the G20 is a forum where leaders discuss various issues and make pronouncements, which signals their intentions. Then, they are implemented by relevant nations or international organisations. For instance, if the G20 makes a pronouncement on trade, the actual implementation of the pronouncement will be done by an organisation such as the World Trade Organization (WTO).

#### **How is the G20 presidency determined?**

The G20 presidency is rotated among its members who (except the EU) are divided into 5 groups.

The presidency rotates from group to group. However, each country within a group is eligible for presidency when it is their group's turn. Thus, the countries in the eligible group negotiate among themselves to determine the group's presidency.

#### **What does the G20 presidency entail?**

As previously mentioned, the presidency is responsible for setting the G20 agenda for the year. This is done in consultation with other members as well as pertinent global developments.

The president also gets to host various meetings and the G20 Leaders' Summit, which is the culmination of all the work done by the group at lower levels through the year. It is in charge of all logistics and in absence of a permanent secretariat, provides the human and material resources to successfully conduct the workings of the forum for the year. Moreover, the G20 president also has the prerogative to send invitations to other guest countries and organisations to take part in G20 processes for the year (more on that later).



In short, the G20 presidency is a major honour and responsibility, one which allows the country to determine the workings of the group for a year.

#### **What is the working structure of the G20?**

The G20 works in three major tracks — two of them are official and one is unofficial, former Indian diplomat JS Mukul, who served as sous-sherpa for the G20 process and was involved in six G20 summits between 2008 and 2011, told The Indian Express. The official tracks are the Finance Track and the Sherpa Track. The unofficial track includes engagement groups or civil society groups.

**FINANCE TRACK:** Headed by the finance ministers and central bank governors, who usually meet four times a year, it focuses on fiscal and monetary policy issues such as the global economy, infrastructure, financial regulation, financial inclusion, international financial architecture, and international taxation. It currently has 8 working groups.

**SHERPA TRACK:** Established after the inception of G20 Leaders' Summit in 2008, it is headed by Sherpas, who are the appointed representatives of the member countries' president/prime minister. It focuses on socio-economic issues such as agriculture, anti-corruption, climate, digital economy, education, employment, energy, environment, health, tourism, trade, and investment. It currently has 13 working groups.

**ENGAGEMENT GROUPS:** The unofficial track comprises non-government participants from each member country dealing with a gamut of issues. These groups draft recommendations to the G20 leaders that contribute to the policy-making process. There are 11 Engagement Groups at the moment.

#### **What is on the G20 summit agenda and what has happened at the meetings so far?**

The end of such summits usually results in a declaration or joint communique agreed to by all of the members. It outlines common positions on matters such as international conflicts, climate change-related commitments, the areas of future cooperation, etc.

While no concrete agenda is mentioned at the outset, broader climate change-related cooperation and sustainability have been pointed to in official statements. India, which has pitched itself as a voice of the Global South, will also have to balance its interests related to the West and Russia over a common statement on the Ukraine War.

The absence of Russian President Vladimir Putin and Chinese President Xi Jinping at the summit could make this more complicated. However, the two countries will be represented by senior officials: Foreign Minister Sergey Lavrov from Russia and Chinese Premier Li Qiang.

As of last month, India's G20 Sherpa Amitabh Kant said that 185 meetings, including 13 ministerial-level meetings, had been held so far. This includes meetings of Finance Ministers and Central Bank governors, and other Ministerial Meetings on Health, Tourism, Agriculture, Climate, etc.

Twelve outcome documents and 12 other deliverables had been adopted with consensus but no joint communique has been adopted, largely because of Russia's objections to language concerning the Ukraine War and China's opposition to the matter being brought up at the forum's meetings in the first place. It has said the forum should focus on economic issues.



### **Who is invited to this year's G20 Summit?**

In addition to the member countries, each year, the G20 president invites guest countries to participate in the G20 meetings and the Summit. This year, India has invited Bangladesh, Egypt, Mauritius, the Netherlands, Nigeria, Oman, Singapore, Spain and UAE as guest countries during its G20 presidency.

The president also invites certain international organisations (IOs). India has invited the International Solar Alliance (ISA), the Coalition of Disaster Resilient Infrastructure (CDRI) and the Asian Development Bank (ADB) as guest IOs in addition to the regular G20 IOs (who participate every year) which include the UN, the International Monetary Fund (IMF), the World Bank (WB), the World Health Organization (WHO), the WTO, the International Labour Organization (ILO), the Financial Stability Board (FSB) and the Organization for Economic Cooperation and Development (OECD).

India has also invited the chairs of the following regional organisations (RO): the African Union (AU), the African Union Development Agency-New Partnership for Africa's Development (AUDA-NEPAD) and the Association of Southeast Asian Nations (ASEAN).

### **Do the invitees remain the same every year?**

One of the main prerogatives that comes with the G20 presidency is the ability to invite guest countries, IOs and ROs. These invitations are a tool for the president to set the agenda and guide G20's workings.

For instance, experts have pointed out that India's invitations to African countries and ROs this year are part of a concerted Africa outreach by the Narendra Modi government, an effort to counter China's ever-growing presence in the continent. India has even made calls for AU to be made a permanent member of the G20.

### **Why are the International and Regional Organisations invited?**

IOs and ROs are important for the G20 to achieve its aims of furthering international cooperation and implementing any pronouncements made by the group.

As mentioned previously, the G20 itself is an informal grouping, in the sense that it does not have any direct power to govern or implement any pronouncements made. Rather, it depends on its members and IOs to do that. This is why it is crucial to involve IOs in the workings of the G20. For instance, one of the areas India's G20 presidency has emphasised has been health. An organisation such as the WHO is crucial in this regard, as decisions made in the G20 can be implemented and carried forward by it.

Similarly, ROs being a part of the G20 helps further the group's reach to countries that otherwise might not be members but who remain crucial to the G20's agenda nonetheless. For instance, ASEAN as an RO can represent the interests of all its member countries including the likes of the Philippines and Thailand which are not otherwise a part of the G20.

### **What is the theme of the G20 this year?**

According to the official G20 website, this year's theme is "Vasudhaiva Kutumbakam — One Earth, One Family, One Future". It is drawn from the ancient Sanskrit text of the Maha Upanishad.



“Essentially, the theme affirms the value of all life – human, animal, plant, and microorganisms – and their interconnectedness on the planet Earth and in the wider universe,” it adds.

Further, the website says the theme also spotlights LiFE (Lifestyle for Environment), “with its associated, environmentally sustainable and responsible choices, both at the level of individual lifestyles as well as national development, leading to globally transformative actions resulting in a cleaner, greener and bluer future.”

#### **What is the 2023 G20 logo?**

A government press release says: “The G20 Logo draws inspiration from the vibrant colours of India’s national flag – saffron, white and green, and blue. It juxtaposes planet Earth with the lotus, India’s national flower that reflects growth amid challenges. The Earth reflects India’s pro-planet approach to life, one in perfect harmony with nature.”

Prime Minister Narendra Modi had said while introducing the logo, “The symbol of the lotus in the G20 logo is a representation of hope in this time. No matter how adverse the circumstances, the lotus still blooms. Even if the world is in a deep crisis, we can still progress and make the world a better place.”

The seven petals of the lotus in the logo are also significant. They represent the seven continents.

The logo is to reflect the idea of Vasudhaiva Kutumbakam (the whole earth is a family). “The lotus flower symbolises our Puranic heritage, our aashta (belief) and boddhikta (intellectualism),” the PM said.

### HOW GLOBAL EVENTS PUT TERRORISM ON G20’S AGENDA

G20 is a grouping on 20 largest economies in the world that came together in 1999 largely for issues related to the global economy, such as international financial stability, climate change mitigation and sustainable development. Thus, it has never been a forum that was primarily concerned with security issues of security.

In fact, in the first two ministerial conferences (G20 started having summits only from 2008 onwards), terrorism did not even find a mention.

However, following the events of September 11, 2001, as global terrorism reached American shores, the attention of international powers turned to the menace that had long impacted India and certain other regions in West and South Asia. The G20 Meeting of Finance Ministers and Central Bank Governors held in November that year mentioned “terror”, “terrorist” and “terrorism” a total of 29 times in its communique.

This was largely a result of a push by the US following the 9/11 attacks as it felt need for an international cooperation, specially on terror financing. This resulted in strengthening of Financial Action Task Force (FATF) and certain other arms of international financial bodies.

“Terrorism was never really a core topic for the G20 when its first summit took place in 2008. Being a predominantly economic forum, security debates within it were almost frowned upon. However, Turkey’s G20 presidency in 2015 can be seen as a pivotal moment when Ankara decided that for its national, and economic interest, it was an important issue to raise,” Kabir Taneja, a fellow with the Strategic Studies programme at Observer Research Foundation, told The Indian Express.



### How has G20's approach to terrorism evolved over the years?

Following the 2001 communique, there were fewer mentions of terrorism in the communiqués until the 2015 summit in Turkey, when dedicated documents started being produced in the summit. In fact, a 2002 meet, held in New Delhi, had only three mentions of the word “terror” or “terrorism” and no significant assertion beyond “renewed commitment” to combating terror financing.

The Turkey Summit once again picked the issue up, this time, in the aftermath of the Paris attack and the rise of Islamic State. The summit communique was significant for expressing “resolve in the fight against terrorism in all its forms and wherever it occurs”.

### What can India expect out of the G20 on the issue?

India has already raised issues of terror financing in the two G20 conferences of Foreign Ministers’ meet in March and the conference organised by the MHA. These include threats from “new and emerging technologies for terrorist purposes”, “linkages between terrorism and organized crime”, “denying terrorist groups safe haven”, “securing digital public infrastructure”, “challenges posed by the darknet and crypto-currencies” and “collective measures to counter money laundering and terrorism financing”.

## 5 THINGS TO NOTE FROM INDIA'S PERSPECTIVE, AHEAD OF THE G20 SUMMIT IN NEW DELHI

On Saturday morning, the world’s top leaders will gather in New Delhi for the G20 Summit to discuss the global challenges of our times — and to possibly find a direction towards resolving some of them.

India has hosted multilateral conferences, events, and summits earlier — the UNESCO conference in 1956, the Asian Games of 1982, the famous NAM Summit of March 1983, the Commonwealth Games of 2010, and the India-Africa Forum Summit in 2015. None of those could have rivalled the scale and importance of the G20 Summit of 2023.

For the first time, leaders of all permanent members of the United Nations Security Council — called the P-5 countries — will be in New Delhi at the same time. China’s President Xi Jinping and Russia’s President Vladimir Putin have chosen to give the Summit a miss, but they will be represented by Premier Li Qiang and Foreign Minister Sergey Lavrov respectively. The two-day Summit will conclude on Sunday. From India’s perspective, here are five things to take note of, and to watch out for.

### 1. Building consensus in a polarised world

The Russia-Ukraine conflict has polarised the grouping, and India’s biggest challenge is to negotiate a “compromise” document in the G20 communique. While the G7, the grouping of the world’s richest democracies, wants condemnatory language on Russia’s actions and words, Moscow and Beijing will allow none of that in the declaration.

At the G20 Summit in Bali last year, Indonesian negotiators managed to broker a compromise and find a language formulation that was acceptable to both the US-led Western alliance and the Russia-China bloc. Indian negotiators too would want to produce a consensus joint communique.



But this will need a lot of work from negotiators on all sides, and the final statement is expected to go down to the wire.

## **2. G20 in every Indian state, including smaller cities**

In taking the G20 meetings and priorities to every part of the country, India reimagined the Presidency in a way no host has done so far. Indonesia tried a similar approach, holding some 25 meetings, but India's 200-plus meetings across more than 50 locations has created a new template in size and scale.

While some critics saw this approach as a political campaign by the Narendra Modi government ahead of Lok Sabha polls, it has ensured widespread awareness of India's Presidency across cities and even Tier-2 towns. This could over time result in a situation where foreign policy and diplomacy become a talking point in India's elections.

## **3. Deliverables for now and for future G20 presidencies**

India is discussing an ambitious set of proposals across sectors — digital public infrastructure (thanks to the success of digital payments in India), gender, development, multilateral reforms, climate change, health and future pandemics, use of technology, etc.

On most of these issues, the Sherpas will have to come up with final, actionable, concrete outcomes for the leaders' declaration. These deliverables are also being discussed so they can be implemented by the future presidencies — Brazil and South Africa are next.

## **4. Voice of the Global South, especially of Africa**

India has taken up the mantle of leading the developing and underdeveloped world during its G20 Presidency. The economic shocks delivered by the Covid-19 pandemic and the Russia-Ukraine war engendered issues of food security and a crisis in fuel and fertiliser prices, which have hit the developing and the underdeveloped countries hard. New Delhi took the lead in organising the Voice of the Global South Summit in January this year, which was attended by about 120 countries. The views and concerns expressed by these countries were brought to the table of the G20, who comprise 85% of the world's GDP and 75% of global trade.

In addition to articulating the concerns of the Global South, India has advocated the expansion of the G20 by including the African Union, which represents the 54 countries of the continent. The G20 now has only one African country — South Africa — as a member.

Should the G20 be expanded to G21 by the end of the Delhi Summit, India's claim to permanent membership of the UN Security Council will have been strengthened further — it will have garnered the support and goodwill of the Global South, including the countries of the African continent.

## **5. The China conundrum and G20's challenge**

The biggest complication for India is presented by China. India's strained ties with China over the ongoing border standoff will be underlined by President Xi's conspicuous and telling absence from the Summit. Xi's absence also shows the limits of multilateral summits insofar as New Delhi and Beijing have been unable to keep their differences from coming in the way of a multilateral summit.





Despite the border dispute, the two countries have earlier cooperated at the United Nations, BRICS, Shanghai Cooperation Organisation (SCO), the Climate Change Conference (COP), and even the G20. Now, there is a danger of bilateral ties going the India-Pakistan way at multilateral fora — the virtual collapse of the South Asian Association for Regional Cooperation (SAARC) being an example.

President Xi's decision to stay away has put the consensus for the communique at risk. Premier Li has the tough task of bridging the gap and rebuilding trust.

## INDIA THAT IS BHARAT

India and Bharat have both evoked the same emotions among patriots for decades, but these labels of pride have now been weaponised for narrow political ends. The Bharatiya Janata Party government at the Centre has decided to use Bharat instead of India in some official communication and documents, a practice that its representatives say will now expand. 'India, that is Bharat,...' is how the Constitution of India names the country, and the use of one or the other has been largely contextual all this while. The cultural echoes of Bharat have never been in doubt, and the current hype around it is more about a campaign to discard the use of India, as if both cannot exist in harmony. India, according to this telling, is a foreign imposition, and hence unsuitable for national dignity. Bharat, linked as it is to various ancient sources, goes beyond the geographical and cultural landscape that constitutes the modern republic of India. In that sense, both names are an outcome of India's nation-building journey. Labouring to tease out the foreign from the native in the expanse of this nation that hosts a multitude of ethnic, linguistic, and genetic diversity and that has been formed as a result of millennia of migrations and cross-currents of human interactions serves no purpose other than creating new flashpoints in society.

This farcical hubbub hoisted upon the country should have been allowed to dissipate and recede, but the knee-jerk reaction of the Opposition gave it the aura of a fundamental identity question before the nation. The Rashtriya Swayamsevak Sangh has been asking for privileging the use of Bharat over India for long, but the Opposition bloc's decision to label itself INDIA as an acronym also might have influenced the BJP's hurry in the naming exercise. Far from demonstrating a nation's strength and pride, the government's name game undermines the confidence and soft power of the nation. Bharat has been part of popular culture, political and cultural idioms, and literature across many Indian languages. Similarly, India is also used by millions within and outside the country who yearn for its progress. It is possible that contexts and constituencies of these proper nouns might vary, but that is the very reason to desist from attempting to impose the use of one and edge out the other. Whether it is India or Bharat, the essence of the meaning that it conveys remains the same. The needless juxtaposition of the two names should not affect the bonding of the inhabitants in the pursuit of a misplaced cultural combat. Let India and Bharat coexist as they have always been.

## INDIA, THAT IS BHARAT: A SHORT HISTORY OF THE NATION'S NAMES, FROM THE RIG VEDA TO THE CONSTITUTION OF INDIA

There is speculation of an official change in the name of the country from India to Bharat, even though Article 1 of the Constitution uses the two names interchangeably: "India, that is Bharat, shall be a Union of States."

Opposition politicians have been posting images of an official invitation to a G20 dinner hosted by "The President of Bharat" instead of the usual "President of India".

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



There is speculation of an official change in the name of the country from India to Bharat, even though Article 1 of the Constitution uses the two names interchangeably: “India, that is Bharat, shall be a Union of States.” Also, several names such as Reserve Bank of India and the Indian Railways already have Hindi variants with “Bharatiya” in them.

In June 2020, the Supreme Court had dismissed a PIL seeking to remove “India” from the Constitution and retain only Bharat in order to “ensure the citizens of this country...get over the colonial past” saying: “India is already called Bharat in the Constitution itself.”

#### **So where does the name ‘Bharat’ come from?**

The roots of “Bharat”, “Bharata”, or “Bharatvarsha” are traced back to Puranic literature, and to the epic Mahabharata. The Puranas describe Bharata as the land between the “sea in the south and the abode of snow in the north”.

Social scientist Catherine Clémentin-Ojha explained Bharata in the sense of a religious and socio-cultural entity, rather than a political or geographical one. ‘Bharata’ refers to the “supraregional and subcontinental territory where the Brahmanical system of society prevails”, Clémentin-Ojha wrote in her 2014 article, ‘India, that is Bharat...’: One Country, Two Names (South Asia Multidisciplinary Academic Journal).

Bharata is also the name of the ancient king of legend who was the ancestor of the Rig Vedic tribe of the Bharatas, and by extension, the progenitor of all peoples of the subcontinent.

Writing in January 1927, Jawaharlal Nehru alluded to the “fundamental unity of India” that has endured from “the remote past”: “a unity of a common faith and culture. India was Bharata, the holy land of the Hindus, and it is not without significance that the great places of Hindu pilgrimage are situated in the four corners of India — the extreme South overlooking Ceylon, the extreme West washed by the Arabian Sea, the East facing the Bay of Bengal and the North in the Himalayas.” (Selected Works Vol. 2)

#### **And what about ‘India’ and ‘Hindustan’?**

The name Hindustan is thought to have derived from ‘Hindu’, the Persian cognate form of the Sanskrit ‘Sindhu’ (Indus), which came into currency with the Achaemenid Persian conquest of the Indus valley (northwestern parts of the subcontinent) that begin in the 6th century BC (which was the time of The Buddha in the Gangetic basin).

The Achaemenids used the term to identify the lower Indus basin, and from around the first century of the Christian era, the suffix “stan” came to be used with the name to create “Hindustan”.

The Greeks, who had acquired knowledge of ‘Hind’ from the Achaemenids, transliterated the name as ‘Indus’. By the time the Macedonian king Alexander invaded India in the 3rd century BC, ‘India’ had come to be identified with the region beyond the Indus.

By the time of the early Mughals (16th century), the name ‘Hindustan’ was used to describe the entire Indo-Gangetic plain. Historian Ian J Barrow in his article, ‘From Hindustan to India: Naming Change in Changing Names’ (Journal of South Asian Studies, 2003) wrote that “in the mid-to-late eighteenth century, Hindustan often referred to the territories of the Mughal emperor, which comprised much of South Asia”.



From the late 18th century onwards, British maps increasingly began to use the name 'India', and 'Hindustan' started to lose its association with all of South Asia. "Part of the appeal of the term India may have been its Graeco-Roman associations, its long history of use in Europe, and its adoption by scientific and bureaucratic organisations such as the Survey of India," Barrow wrote.

"The adoption of India suggests how colonial nomenclature signalled changes in perspectives and helped to usher in an understanding of the subcontinent as a single, bounded and British political territory," he added.

#### **How did 'Bharat' and 'India' come into the Constitution?**

In his monumental 'Discovery of India', Nehru referred to "India", "Bharata" and "Hindustan": "Often, as I wandered from meeting to meeting, I spoke to my audiences of this India of ours, of Hindustan and of Bharata, the old Sanskrit name derived from the mythical founders of the race."

But when the question of naming India in the Constitution arose, 'Hindustan' was dropped, and both 'Bharat' and 'India' were retained.

During the Constituent Assembly debates the "Name and territory of the Union" was taken up for discussion on September 17, 1949. Right from the time the first article was read out as "India, that is Bharat, shall be a Union of States", a division arose among the members. There were quite a few members who were against the use of the name 'India', which they saw as being a reminder of the colonial past.

Hari Vishnu Kamath suggested that the first article should read, "Bharat, or in the English language, India, shall be and such". Seth Govind Das, representing the Central Provinces and Berar, proposed: "Bharat known as India also in foreign countries".

Hargovind Pant, who represented the hill districts of the United Provinces, made it clear that the people of Northern India "wanted Bharatvarsha and nothing else".

Pant argued: "So far as the word 'India' is concerned, the Members seem to have, and really I fail to understand why, some attachment for it. We must know that this name was given to our country by foreigners who, having heard of the riches of this land, were tempted towards it and had robbed us of our freedom in order to acquire the wealth of our country. If we, even then, cling to the word 'India', it would only show that we are not ashamed of having this insulting word which has been imposed on us by alien rulers."

None of the suggestions were accepted by the committee. However, as Clémentin-Ojha pointed out in her article, they "illustrated contrasting visions of the budding nation".

### **BENGAL'S SONG OF HARMONY**

On Thursday, the West Bengal Assembly's resolution to mark the first day of the Bengali calendar — poila boishakh — as the state's foundation day and Rabindranath Tagore's "Banglar mati Banglar jol (Bengal's land, its water...)" as the state anthem met with mixed response. While the statehood day remains contested — a section of MLAs voted in favour of the Centre's suggestion to mark it on June 20 — the choice of the state anthem had lesser dissonance.

While ostensibly an ode to state identity, Tagore's "Banglar mati" was actually a protest song written to emphasise communal harmony at the time of Lord Curzon's decision to partition the Bengal province — the first of the two partitions the region underwent — on religious lines in

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



1905. On October 16, 1905, the day of the partition, Tagore had called for a rakhi festival, not between siblings, but communities. He himself had been at the head of the large procession, singing “Banglar mati, Banglar jol”, urging others to join their non-cooperation movement against the coloniser’s divisive politics. It could not stop the partition, but the people’s protest had made its mark. The partition was reversed six years later.

Tagore died in 1941, much before June 20, 1947, when the Bengal Legislative Assembly had met to decide if the Bengal Presidency would remain with India or be divided, along religious lines. The Assembly had voted for Partition, a prelude to a bloody estrangement whose scars have never healed. Perhaps, it is a sign of the times that June 20 came up as a foundational day in the state’s history. But, Bengal’s people would do well to remember the concluding stanza to their new state anthem: “Bangalir pran, Bangalir mon, Bangalir ghore joto bhai bon, ek hauk, ek hauk, ek hauk, he bhagoban... (Bengal’s heart and soul, all the brothers and sisters it holds together, may they all become one, o God)”.

#### EXPRESS VIEW: SUPREME COURT SLIPS, LOWERS ITS BAR BY ASKING AN MP TO FILE A LOYALTY AFFIDAVIT

When a petitioner knocks on the door of the Supreme Court of India, there are some things they take for granted and count on. That, whatever their case, if the court has decided to hear them, they will be heard with respect, and in a way that protects their freedom and dignity. The SC is the custodian, after all, of the letter and spirit of the Constitution, which encompasses everyone, and works for all. As the present Chief Justice of India said, while delivering the KT Desai Memorial lecture at the central court hall of Bombay High Court Mumbai in 2018, “the Constitution works even if you don’t believe in it”. Because “the wisdom of a people the Constitution trusts”. That wise and generous court, which can be relied on to read in the Constitution its best version — “we” in “we the people of India”, the CJI also said, in the context of the judgment on Section 377, must be an “ever inclusive and expansive we” — has slipped. It has let down Mohammad Akbar Lone, National Conference leader and Lok Sabha MP, who is the chief petitioner against the Union of India in the case challenging the abrogation of Article 370. It did so by allowing the Solicitor General, in the course of the hearing in a case that involves seminal constitutional issues, to divert the proceedings to an unseemly questioning of the petitioner’s allegiance to the Constitution. It did so by allowing itself to be prodded by the government’s senior-most law officer into setting down for Lone, in the backdrop of J&K, a version of the mean-spirited Tebbit Test.

The “affidavit” that the court asked Lone to file, stating “unconditionally” that he owes allegiance to the Constitution of India and that J&K is an integral part of India, is uncalled for. It asks a citizen, an MP and a former MLA, who was also a speaker of the assembly in the erstwhile state of J&K, to prove and perform his loyalty to the country and its Constitution. The ostensible reason lies in remarks he allegedly made in defence of Pakistan as the MLA from Sonawari during a heated assembly debate in the aftermath of a terror attack on the Sunjwan army camp. BJP legislators had raised the issue, with some blaming a section of the minority community for the attack and the then Speaker, also from the BJP, made remarks he had to later expunge along with those made by Lone. Lone’s party, the NC, dissociated itself from what he had said, calling it “completely unacceptable to the party”. In a democratic discourse, especially in the former J&K Assembly, where allegiances and affiliations were often grist for the political mill, that should have been the end of the matter. That it was not, that the episode should be weaponised by the government several years later, and more disturbingly, that the Court should allow itself to be hectored by it, that it should play along, is a sad moment.



The Solicitor General's peevishness still not quenched, he has exhorted the Court to read the affidavit Lone has submitted for what it does not say. Instead of persisting with this gracelessness, the SG would be better off asking his political masters if they demanded affidavits of loyalty when their party allied with the NC — from July 2001 to December 2002, Omar Abdullah was a minister in the Vajpayee government. As for the court, it should tell the SG to back down. For, in respecting the dignity of the petitioner, the court affirms some of its own.

## ROW OVER SANATAN DHARMA: THE HISTORY OF DMK'S ANTI-RELIGION, ANTI-CASTE ORIGINS

DMK leader and Tamil Nadu Minister Udhayanidhi Stalin's statement, saying Sanatan Dharma is against social justice and should hence be eradicated, has led to controversy. On September 6, an FIR against Udhayanidhi, under IPC sections 295 A (deliberate and malicious acts intended to outrage the religious feelings of any class by insulting its religion or the religious beliefs) and 153 A (promoting enmity between two different groups), was registered in Uttar Pradesh, police said.

The son of Chief Minister MK Stalin, Udhayanidhi said, "What is the meaning of Sanatan? It is eternal, that is, it cannot be changed; no one could pose any question and that is the meaning," on Saturday, adding that Sanatan divided people on the basis of caste. Later, he posted on X (formerly Twitter): "I am ready to present extensive writings of Periyar and Ambedkar, who conducted in-depth research on Sanatan Dharma and its negative impact on society..."

Dravida Munnetra Kazhagam (DMK), Tamil Nadu's ruling party, has its roots in the Self-Respect Movement begun by EV Ramaswamy 'Periyar'. The early 20th-century movement championed opposition to caste and religion and positioned itself as a rationalist movement against social evils. Through the years, these ideals have influenced the state's politics, including the parties DMK and the All India Anna Dravida Munnetra Kazhagam (AIADMK), which emerged out of the movement.

### **What was the Self-Respect Movement, and how did Tamil Nadu's political parties emerge out of it?**

Periyar, the founder of the Self-Respect Movement (1925), was strongly anti-caste and anti-religion in his outlook. He advocated major social reforms related to caste and gender, and opposed the domination of Hindi, emphasising the distinct cultural identity of the Tamil nation.

In 1938, the Justice Party (which Periyar was a member of) and the Self-Respect Movement came together. In 1944, the new outfit was named Dravidar Kazhagam. DK was anti-Brahmin, anti-Congress, and anti-Aryan (read North Indian), and launched a movement for an independent Dravida nation. However, this particular demand would gradually peter out due to a lack of popular support.

Post-independence, Periyar refused to contest elections. In 1949, one of Periyar's closest aides, CN Annadurai, split from him due to ideological differences. Annadurai's DMK joined the electoral process. The party's platforms were social democracy and Tamil cultural nationalism.

In 1969, following the death of Annadurai, M Karunanidhi took control of DMK. In 1972, differences between him and actor-politician M G Ramachandran led to a split in the party. MGR formed the AIADMK, with associations of his fans as the organisation's bedrock.

In 1977, MGR came to power and remained undefeated until his death in 1987. He somewhat diluted the rationalist and anti-Brahmin agenda that was core to the DK, opting for welfarism as party ideology.



### What were Periyar's views on the Hindu religion and caste?

Historian Ramachandra Guha wrote in his book 'Makers of Modern India', that in states like Tamil Nadu and Maharashtra, "it was Brahmins who took early advantage of British rule, learning English in order to serve the new rulers as teachers, lawyers, doctors, clerks and civil servants". They were also well-represented in the emerging Congress party and had enjoyed a high social status in society, traditionally.

"Whether by accident or design, the policies of the Raj made them dominant in an economic and political sense as well. It was the danger of Brahmin hegemony in all spheres of life that lay behind the activism of Jotirao Phule and B R Ambedkar. Their analogue in south India was an equally remarkable thinker organiser named E V Ramaswami," Guha wrote.

Through his writings and speeches, Periyar propagated his core beliefs, which were fiercely critical of Hindu religious practices that marginalised some sections of society.

According to the article 'Freedom from God: Periyar and Religion', by Dr Karthick Ram Manoharan, early on, Periyar published translations of prominent works advocating atheism and socialism, like Karl Marx and Friedrich Engels's 'The Communist Manifesto', Bhagat Singh's 'Why I am an Atheist', Bertrand Russell's 'Why I am not a Christian'.

Guha's book also contains some of Periyar's writings and speeches. In a 1927 speech, he said, "No other religion spends as much as we do. Within a short time of their coming Christians have rallied our people, given them education, and have made themselves our masters... But our religion, said to be made by god and millions and millions of years old, says that a majority of the people should not read its scriptures; and if one violates it, there are punishments such as cutting off the tongue that studies, pouring molten lead into ears that hear, and gouging out of the heart that learns."

Periyar also questioned the dominance of a few caste groups in society, linking them to the existence of religion itself.

"Periyar wrote in his party paper Kudiarasu on 7 June 1931 that the non-Brahmins and the untouchable castes, the poor and the working classes, if they desired equality and socialism, needed to destroy Hinduism first," according to Dr Manoharan. Periyar also wrote critical accounts of Hindu epics like the Ramayana.

"Periyar saw religion as an institution of social power that privileged the Brahmins as an elite caste group to the detriment of equality and liberty of women and lower castes in the Hindu hierarchy." He did not expect reform to happen within this, and suggested eradicating the religion altogether. One of Periyar's most famous quotes says, "There is no god. He who created god is a fool. He who propagates god is a scoundrel. He who worships god is a barbarian."

CN Annadurai, meanwhile, would go on to have a moderate stance on the matter of religion. He said later, "I would neither break the Ganesha idol nor the coconut (make a religious offering)." His protege and later Chief Minister M Karunanidhi was also an atheist. As a poet and scriptwriter, he further criticised Brahmins and religion through popular plays and films that reached large audiences and spoke to them in their native language.

In his speech on Saturday, at a meeting of the Tamil Nadu Progressive Writers and Artists Association, Udhayanidhi also spoke of points that were made earlier by Periyar and connected them to the DMK's political platform. "What did Sanatan do to women? It pushed women, who lost their husbands, into fire (the erstwhile practice of Sati), it tonsured the heads of widows and made



them wear white saris... What did the Dravidam (the Dravidian ideology followed by DMK regime) do? It gave fare-free travel for women in buses, gave Rs 1,000 monthly assistance to girl students for their college education," he said.

"Let us take a vow to win in all the 39 Parliamentary constituencies in Tamil Nadu and the one segment in Puducherry (in the 2024 Lok Sabha polls). Let Sanatan fall, Dravidam win," Udhayanidhi said. The BJP has alleged that "a complete eradication" of Hindu dharma is the "primary agenda" of the opposition alliance INDIA, which includes the DMK.

## WHAT IS THE DEBATE AROUND 'ONE NATION, ONE ELECTION'?

### The story so far:

#### What is the ONOE plan?

The idea of ONOE centres around the concept of synchronising the timing of Lok Sabha and State Assembly elections across all States to reduce the frequency of polls throughout the country.

After the enforcement of the Constitution on January 26, 1950, the first-ever general elections to Lok Sabha and all State Assemblies were conducted simultaneously in 1951-1952. The practice continued into the three subsequent Lok Sabha elections until 1967, after which it was disrupted. The cycle was first broken in 1959 after the Centre invoked Article 356 (failure of constitutional machinery) of the Constitution to dismiss the then-Kerala government. Subsequently, due to defections and counter-defections between parties, several Legislative Assemblies dissolved post-1960, which eventually led to separate polls for Lok Sabha and State Assemblies. Currently, the assembly polls in the States of Arunachal Pradesh, Sikkim, Andhra Pradesh and Odisha are held together with the Lok Sabha elections.

#### What do reports say about ONOE?

In August 2018, the Law Commission of India (LCI), chaired by Justice B. S. Chauhan, released a draft report on simultaneous elections, wherein the constitutional and legal questions related to the issue were analysed. Notably, the Commission submitted that simultaneous elections are not feasible within the existing framework of the Constitution. It said that the Constitution, the Representation of the People's Act 1951 and the Rules of Procedure of Lok Sabha and State Assemblies would require appropriate amendments to conduct simultaneous polls. The commission also recommended it receive ratification from at least 50% of the States. However, with respect to the advantages of holding simultaneous polls, the commission said that ONOE will lead to the saving of public money, reducing the strain on the administrative setup and security forces, timely implementation of government policies, and administrative focus on development activities rather than electioneering.

Way back in 1999, the LCI headed by Justice B. P. Jeevan Reddy also advocated for simultaneous elections.

#### What are the concerns?

The foremost concern is with regard to its feasibility. Article 83(2) and 172 of the Constitution stipulates that the tenure of Lok Sabha and State Assemblies respectively will last for five years unless dissolved earlier and there can be circumstances, as in Article 356, wherein assemblies can be dissolved earlier. Therefore, the ONOE plan raises serious questions — what would happen if



the Central or State government collapses mid-tenure? Would elections be held again in every State or will the President's rule be imposed? Amending the Constitution for such a significant change would not only necessitate extensive consideration of various situations and provisions but would also set a concerning precedent for more constitutional amendments.

Second, the idea of ONOE does not square with the concept of 'federalism' as it is established on the notion that the entire nation is "one" contradicting the content of Article 1 which envisages India as a "Union of States". Third, the present form of recurrent elections can be seen as beneficial in a democracy as it allows voters to have their voices heard more frequently. As the underlying issues of national and State polls are different, the present framework prevents the blending of issues, ensuring greater accountability.

The Central government has also highlighted the substantial costs associated with frequent elections. However, this notion is misleading. In an article in *The Hindu*, the author contended whether the Election Commission's expenditure of ₹8,000 crore over five years, amounting to ₹1,500 crore annually, or ₹27 per voter per year, can be considered a 'massive' expense for maintaining the pride of being the world's largest electoral democracy.

#### PETULANT INTIMIDATION

The registration of a police case against editors representing the Editors Guild of India (EGI) and the belligerent remarks of the Manipur Chief Minister, N. Biren Singh, constitute a petulant and intimidatory response to a report released by a fact-finding committee of the EGI. The report's focus was on media coverage of the ethnic conflict that broke out early in May, and its main conclusion was that there was one-sided coverage by journalists during the conflict, but it also contained observations and conclusions indicating that the State leadership was partisan during the conflict. In a welcome move, the Supreme Court of India has given interim protection from arrest to those named in the first information report (FIR). Mr. Singh has sought to justify the filing of an FIR under sections relating to promoting enmity between two communities and wounding religious feelings by claiming that the three-member panel's report is one-sided and may provoke further violence. However, going beyond criticising the report, he said its authors were "anti-state, anti-national and anti-establishment" and claimed that he would not have permitted them to visit the State had he known their purpose. There is no justification for such intimidatory statements even if Mr. Singh is entitled to disagree with the report. And there can be no doubt that there is no need to prosecute anyone for seeking answers and ascertaining facts about a prolonged spell of violence and conflict.

The Guild sent a team to ascertain facts in response to complaints that the media was playing a partisan role. There was also a complaint from the Indian Army too that the media coverage was "arousing passion and not letting sustainable peace come in". Besides flagging one-sided coverage, the report also underscores that the Internet ban made matters worse and had a deleterious impact on journalism. It reveals a preference for self-censorship — so that the volatile situation was not inflamed further — and reliance on the State government for news. "This narrative under the N. Biren Singh dispensation became a narrow ethnic one playing up to the biases of the majority Meitei community," it says. One may question whether such direct imputation of blame on the government's leadership is needed in a report on media behaviour, but the conclusion also points to the possibility that in conflict situations, partisan or ineffective governance will be reflected in journalistic coverage too. On the wider political canvas, there appears to be no significant initiative to effect reconciliation between the two communities locked in conflict in





Manipur and to bring about lasting peace. Meanwhile, it reflects poorly on the authorities if police cases are used to silence fact-finding initiatives of civil society.

## ADITYA L1: ITS FUNCTIONING AND PURPOSE

Usually when we huddle near a fire, we feel warm and as we move away, that warmth is reduced. But surprisingly the sun and its atmosphere don't follow this rule. Made up of a soup of positively charged protons, negatively charged electrons and other ions mixed with the solar magnetic field, extending somewhere between 10 and 20 solar radii from the surface of the Sun, the solar corona, the atmosphere of the Sun is an enigma. While the surface of the Sun is 5,600 degrees, the corona, interestingly, is about two million degrees. "We have some idea of why it is so, but the problem is not fully resolved," says Dipankar Banerjee, Director of Aryabhata Research Institute of Observational Sciences (ARIES). "Observations from Aditya L1 will help us understand the dynamics of the Sun and how solar variability impacts the climate on Earth and affects the space weather," he adds.

### Monitoring the Sun

Discovered by mathematician Joseph Louis Lagrange, L1 is one of the five points located approximately 1.5 million kilometres away, where the gravitational forces of the Sun and the Earth are in equilibrium. Hence, a spacecraft placed at L1 orbits the Sun at the same rate as Earth and affords an uninterrupted view of the Sun, making it an ideal observation post for space-based solar observatories.

The L1 is currently home to the European Space Agency (ESA)- National Aeronautics and Space Administration (NASA) Solar and Heliospheric Observatory (SOHO) observing the Sun and its dynamics. Aditya L1 will join this observatory to unravel the mysteries of the dynamics of the Sun.

Launched on September 2, the craft will undergo five orbit-raising manoeuvres before being slingshot to the L1 point. The ship will coast for about four months before it reaches L1. At that stage, the thrusters will be fired to make the craft circle around the L1, placing it in what is known as a halo orbit around L1. From this vantage point, Aditya L1 can observe the Sun 24X7 using its four remote sensing payloads, and measure in-situ the various parameters of space weather.

### To understand climate variability

Like a heartbeat, solar activity is measured in terms of the number of sunspots. Sunspots are cooler regions on the Sun's surface which increase and decrease in a cycle of 11 years. When the Sun is active, the number of sunspots is in the hundreds, and at solar minimum, the numbers are nearly zero. However, according to Anamparambu Ramaprakash, who is with the Pune-based Inter-University Centre for Astronomy and Astrophysics, "despite the variation in solar activity, the emission in visible and long wavelengths is nearly steady. Whatever changes we observe in the solar radiation, nearly 80% occur in the ultraviolet range," he says. The Earth's upper atmosphere absorbs most of the solar UV rays. "The absorbed energy affects the atmosphere's composition, temperature and other parameters. It is imperative to know how far variation in the UV rays emitted by the Sun contributes to climate variability on Earth," he adds.

The Solar Ultraviolet Imaging Telescope (SUIT) developed by the Inter-University Centre for Astronomy & Astrophysics, in close collaboration with the ISRO, the Center of Excellence in Space Sciences India, Mohanpur, the Manipal Academy of Higher Education etc, will observe the UV radiation from different zones of the solar atmosphere. The onboard intelligence system will

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detect any sudden appearance of bright spots, such as solar flares (a sudden burst of high energy visible light, UV rays, X rays and Gamma rays) on the disc. The automated system will trigger the rapid imaging of different layers, and thus, we will obtain a 3D tomographic view of the Sun. “With this system in place, the event’s progression through the layers of the solar atmosphere can be imaged,” says Mr. Ramaprakash. Combining the data from the Solar Low Energy X-ray Spectrometer (SoLEXS) and the High Energy L1 Orbiting X-ray Spectrometer (HEL1OS) developed by the ISRO’s Bengaluru based U. R. Rao Satellite Centre with SUIT, “can [help us] gain insights into the emergence, progression and energetics of transient events on the surface of the Sun in the UV region”.

Observing the Sun using the SUIT will enable us to better understand climate variation on Earth. “Earth’s climate has definitely changed. Global warming is real. The data from SUIT and other papers of Aditya L1 will help us resolve the contribution of natural and anthropogenic factors driving climate change,” says Mr. Ramaprakash.

### Looking deeper

At times, the Sun sneezes. Like a tongue of fire, a chunk of the corona suddenly accelerates and leaps into interplanetary space. Called Coronal Mass ejection (CME), this cloud consisting of billion tonnes of energetic plasma mixed with a solar magnetic field is hurled at 250 kilometres per second to 3,000 km/s.

Usually, the corona is not visible in the glare of the radiant Sun, except during the brief moment of a total solar eclipse. However, solar physicists can create artificial eclipses in the solar telescope, called coronagraph, to observe the corona. Hitherto, no space telescope could peer at the inner corona, closer to the Sun. “They could look at either 1.1 solar radii or larger,” says Ravindra Belur, Professor of Solar Physic at the Bengaluru-based Indian Institute of Astrophysics. “However, theoretical study indicates that the acceleration of the coronal mass ejection happens below 1.1 solar radii,” he adds. With no insight into the solar corona’s inner part dynamics, we are yet to fully understand the mechanism that drives the CMEs.

The Visible Emission Line Coronagraph (VELC) developed by the Bengaluru-based Indian Institute of Astrophysics in close collaboration with the ISRO can peek as close as 1.05 solar radii, a region never imaged by any solar telescope. From 1.05, it can scan upto three solar radii. With this unique capability of VELC, “we can get crucial information about the mechanism responsible for CME acceleration,” says Mr. Ravindra.

### When a solar storm brews

Along with sunlight and electromagnetic radiation, such as ultraviolet rays, the Sun emits a constant stream of charged particles and a mixture of solar magnetic fields that travel throughout interplanetary space. Called a solar wind, the average speed of the flow near the Earth is about 300 kilometres per second. The solar wind constantly rams the Earth’s magnetosphere, which functions like a shield and deflects most of it. Nevertheless, the energetic particles from the solar wind sneak through the weak magnetic regions of the Earth — the north and south poles and interact with the molecules in the atmosphere, creating the dazzling display of aurora.

Violent eruptions like solar flares and CMEs trigger a strong wind or solar storm. A geomagnetic storm occurs when the solar storm bashes the Earth’s magnetosphere. While brilliant, beautiful



auroras appear as more energetic particles flow through the north and south poles, GPS and short-wave communication are disrupted, and the electronics in the satellite are in danger. Intense geomagnetic storms can induce magnetic-induced currents in the power grid and pipelines, resulting in power outages and fire. The energy from the charged particles heats the upper atmosphere, increasing the density and causing extra drag on satellites in low-earth orbit.

The changes in the solar wind's density, speed and direction is called space weather. Solar storms result in inclement space weather. Aditya L1 will function as a space weather station. The Aditya Solar Wind Particle Experiment (ASPEX) developed by the ISRO's Ahmedabad-based Physical Research Laboratory, the Plasma Analyser Package For Aditya (PAPA) developed by the Thiruvananthapuram based Vikram Sarabhai Space Centre and the advanced Tri-axial High-Resolution Digital Magnetometers developed by the Bengaluru based ISRO's Laboratory for Electro-Optics Systems keep a constant watch over the parameters of space weather near Aditya L1. Using the data from these instruments, scientists can predict probable geomagnetic storms and better understand space weather dynamics.

"Near Earth environ is filled with hundreds of satellites and the change in the space weather can affect them directly. The trajectory can be deflected by impact of a solar storm on upper atmosphere. ISRO alone has 50,000 crore worth of space assets," says Mr. Dipankar. Understanding space weather is an international issue, and the data from Aditya L1 will aid in making models and predicting storms in advance.

#### VIKRAM LANDER DOES A HOP, GOES TO SLEEP; GOODNIGHT TILL SEPT. 22

After Chandrayaan-3's rover Pragyan, its lander, Vikram, has been put into sleep mode. The Indian Space Research Organisation (ISRO) on Monday said that it had put Vikram into sleep mode around 8 a.m.

Hours before, the ISRO said, Vikram had achieved another significant milestone as it successfully undertook a hop experiment, elevating itself by about 40 cm as expected and landing safely at a distance of 30 cm to 40 cm. This "kick-start" enthuses future sample return and human missions, it said.

#### Data received

Before sleep mode was activated, ChaSTE, RAMBHA-LP and ILSA payloads on the lander did in situ experiments at the new location. The data collected were received back on earth. Payloads were now switched off. Lander receivers were kept on, the ISRO said. On Saturday, the space organisation said that Pragyan had completed its assignments and it had been safely parked and set into sleep mode.

#### Pragyan's receiver had been kept on.

The ISRO had said that Vikram would fall asleep next to Pragyan once solar power was depleted and battery drained. The agency was hoping that it would wake up Vikram and Pragyan on September 22. "Hoping for their awakening, around September 22, 2023," it said.

The lander and the rover, with a mission life of one lunar day (14 earth days), have scientific payloads to carry out experiments on the lunar surface. "The lander and the rover will stay on the moon for 14 days until they get sunlight," ISRO Chairman S. Somanath had said earlier.



The solar panels on the lander and the rover have stored energy during the lunar day and will recharge their batteries. Once the sun sets on the moon, temperature can plunge below minus-200 degrees Celsius.

#### **'Kick-start'**

The successful hop experiment and kick-start could have significant bearing on the future missions which are launched with an objective to bring back samples from the moon and also future human missions to the moon.

"Vikram lander exceeded its mission objectives. It successfully underwent a hop experiment. On command, it fired the engines, elevated itself by about 40 cm as expected and landed safely at a distance of 30 cm to 40 cm away. Importance? This 'kick-start' enthuses future sample return and human missions," ISRO posted on X (formerly Twitter).

It added that all systems performed nominally and are healthy.

#### **Folded and redeployed**

"Deployed Ramp, ChaSTE and ILSA were folded back and redeployed successfully after the experiment," the ISRO added.

On November 17, 1967, NASA's Surveyor 6 carried out a lunar hop, becoming the first spacecraft to do lift-off from a celestial body. NASA says Surveyor 6 was commanded to fire its three main liquid propellant thrusters for 2.5 seconds.

"As a result, the lander became the first spacecraft to be launched from the lunar surface. Surveyor 6 lifted up to about 10 feet (3 metres) before landing about 8 feet (2.5 metres) west of its original landing point," NASA says.

### **MOST INDIANS WHO CONSUME NEWS ONLINE LIKE TO WATCH, NOT READ**

The 2023 Digital News Report by the Reuters Institute published recently indicates a shift among online news consumers in India, who are increasingly turning to search engines and mobile news aggregators as their main source of news, thus moving away from websites of traditional outlets. The report underscores that among Indians who engage with news online, the majority favour watching or listening over reading the news.

In Scandinavian countries, well-established news brands continue to enjoy robust direct engagement with consumers for online news. In these markets, people still widely use social media platforms, but mainly for other activities rather than news consumption. In stark contrast, in regions such as Asia, Latin America, and Africa, social media reigns supreme as the main gateway to news, making traditional news outlets increasingly reliant on third-party traffic for audience reach.

Additionally, in specific Asia-Pacific markets such as Japan and Korea, local portals such as Naver and Yahoo! remain the dominant channels for news access. Meanwhile, in India and Indonesia, the role of mobile news aggregators as primary news sources is on the rise.

In countries with a strong tradition of reading, such as Finland and the United Kingdom, approximately 80% of respondents still favour reading news online. Conversely, India and



Thailand, around 40% of people said they prefer to watch news online. Even more dramatically, over half (52%) of the respondents in the Philippines favour video news consumption.

The Digital News Report has also identified alarming declines in both the consumption and dissemination of news in India. The data show that access to online news has sharply fallen by 12 percentage points between 2022 and 2023, a trend that is particularly pronounced on social media platforms, which saw an 11-point decline. These platforms have traditionally been the primary news sources for a younger demographic.

Similarly, television, which commands a wide audience, has not been immune to this trend, experiencing a 10-point dip in viewership among our sample group comprising mainly younger and urban individuals. This decline in news engagement can be partially linked to the diminishing influence of the COVID-19 pandemic, particularly since lockdown measures were relaxed in April last year.

With 38%, trust levels in India are among the least in the region. In countries such as Finland (69%) and Portugal (58%), there are higher trust levels, with lower trust levels in countries with higher degrees of political polarisation such as the United States (32%), Argentina (30%), Hungary (25%), and Greece (19%).

#### CENTRE TO STOP SITES FROM WEAVING 'DARK PATTERNS' TO MISLEAD BUYERS

The Centre has sought public comments on the draft guidelines for prevention and regulation of “dark patterns” on the Internet, particularly in e-commerce platforms. The guidelines include ways to prevent and regulate false urgency, basket sneaking, confirm shaming, forced action, subscription trap and more such “dark patterns”. The public can comment on the guidelines, uploaded on the Union Consumer Affairs Ministry’s website, till October 5.

Dark patterns have been a prominent feature of many apps and websites over the course of the Internet’s growth, and regulators around the world have started taking steps to limit them. In the European Union, for example, users complained that Amazon’s Prime service was difficult to unsubscribe online, as the firm would redirect users through a series of pages seeking to retain them. After talks with the European Commission, the company agreed last June to simplify the process.

#### **‘Misleading users’**

The draft guidelines have defined dark patterns as “any practices or deceptive design patterns using user interface or user experience interactions on any platform; designed to mislead or trick users to do something they originally did not intend or want to do; by subverting or impairing the consumer autonomy, decision making or choice; amounting to misleading advertisement or unfair trade practice or violation of consumer rights.”

Some of the different types of dark patterns, defined by the Ministry, are “false urgency”, meaning falsely stating or implying a sense of urgency; “basket sneaking”, meaning inclusion of additional items at the time of checkout without the consent of the user; and “confirm shaming”, or using a phrase, video, audio or any other means to create a sense of fear or shame or ridicule or guilt in the mind of the user.

The dark patterns include “forced action”, which forces a user into taking an action that would require the user to buy additional goods; “subscription trap”, or the process of making



cancellation of a paid subscription impossible or complex; “interface interference”, the design element that manipulates the user interface; and “bait and switch”, the practice of advertising a particular outcome based on the user’s action. “Drip pricing” is another such practice whereby elements of prices are not revealed upfront and “disguised advertisement” and nagging have been defined by the Ministry in the guidelines.

Renu Gupta, an advocate who has written about dark patterns and competition, commended the introduction of the draft guidelines, but cautioned that enforcement might be a tricky issue. “The real challenge lies in conclusively proving that certain practices indeed qualify as dark patterns,” Ms. Gupta said. “Consider the ‘false category’, for instance. How will a regulator determine if a hotel or platform claiming ‘only 2 rooms remaining – book now!’ is genuinely providing accurate data, or misleading users due to a lack of context,” Ms. Gupta said.

She said some dark patterns were easy to regulate, such as e-retail sites adding items to a customer’s cart, while other categories like ‘disguised advertisements’ may need further clarity.

#### SERVICES LIKE WHATSAPP, GOOGLE MEET NOT YOUR REMIT: IT TO DOT

A DIFFERENCE OF opinion has emerged between the Information Technology Ministry and the Department of Telecommunications over the inclusion of internet-based communication services such as WhatsApp and Google Meet in the upcoming Telecommunications Bill. The IT ministry maintains these services fall under its jurisdiction and should not be regulated under the telecom Bill, The Indian Express has learnt.

A draft copy of the Telecommunication Bill was sent to an inter-ministerial group for consultations in May. Following the objections raised by the Ministry of Electronics and IT (MeitY), the Department of Telecommunications (DoT) is learnt to have gone back to the drawing board to reframe portions of the Bill which regulated over-the-top (OTT) communication services, a senior MeitY official told this paper. OTT communication services are internet-based voice and text messaging services.

Last September, in the first draft of the Bill, the DoT had proposed regulating communication services including voice, video, and data offered by platforms such as Whatsapp as telecom services, requiring them to obtain a licence from the government just like other telecom operators.

WhatsApp and other similar services were mentioned as telecom services under the first version of the draft, addressing a long-standing demand by telecom operators which have on several occasions called for a level playing field. At present, while telecom companies need a licence to offer services, OTT platforms do not.

MeitY believes that under the Allocation of Business Rules, internet-based communication services are not part of DoT’s jurisdiction. In July this year, almost three years after it first recommended against creating a specific regulatory framework for such platforms, the Telecom Regulatory Authority of India (TRAI) commenced fresh consultations on how OTT services can be regulated.

Network neutrality was among the first progressive mandates in the digital space that India adopted after it thwarted zero rating plans including Airtel Zero and Facebook’s Free Basics in 2016. The net neutrality rules means that Internet Service Providers (ISPs) cannot discriminate against Internet content and services by blocking, throttling or granting them higher speed access.



## CENTRE'S DIKSHA E-EDUCATION PLATFORM TO OFFER AI HELP

The National e-Governance Division (NeGD) of the Ministry of Electronics and Information Technology (MeitY) is set to integrate Personalised Adaptive Learning (PAL) into its existing Digital Infrastructure for Knowledge Sharing (DIKSHA) platform. The PAL's software-based approach is expected to allow each student to have an individualised learning experience over the course of the curriculum based on their unique needs and abilities.

DIKSHA, which comes under the Education Ministry, provides e-content for schools by an online portal and a mobile application. It has embedded assistive technologies for learners with visual or hearing challenges. However, DIKSHA is a static content repository.

DIKSHA features digitised National Council of Educational Research and Training (NCERT) textbooks used by national and State Boards. Apart from this, DIKSHA hosts 2.43 lakh contributions by 11,624 academics by way of teaching videos, explainers, and practice questions. Currently, all these contributions are scattered across the platform.

The NCERT has sought the MeitY's expertise in facilitating the PAL's integration into DIKSHA. In an example of how it works, if a student of Class 9 is learning the Pythagoras theorem and makes a calculation mistake, the AI learning system flags it and loops the student back to a basic video of how to make the calculation.

In some States, private players are already administering the PAL, which works on AI or Artificial Intelligence, but budget constraints have been an obstacle.

### Massive exercise

Building the PAL is a massive exercise. Content from across subjects will have to be categorised and different chunks will have to be tagged. New content may also have to be created. "Tagging of content is important to create learning loops, where, say, a student faces difficulty at a certain tag, then supportive material offering an explanation of the tagged concept can be provided," a senior MeitY official told The Hindu.

The official added that school students found chemistry, mathematics, and physics for Classes 9 to 12 to be the most difficult subjects, and the intention is to start building the PAL for these classes to begin with.

With nearly 35 lakh students dropping out in Class 10 and ineligible to qualify for Class 11 every year, the Education Ministry wants to adopt digital learning with a focus on improving learning outcomes and school retention.

### Experiments in States

Andhra Pradesh has signed contracts with three privately owned edtech companies — Reliance Jio Platform's start-up Embibe, ConveGenius, and Mindspark — for training teachers to use IT applications in the classroom, provide analytics for remedial learning, and help students improve their conceptual understanding. "We are currently implementing the PAL in 20 schools of Prakasam district for Classes 6 to 9," a senior Jio Platforms official said.

"Building the core tech platform may cost close to ₹2-3 crore, and then developing and tagging of content will cost another ₹20 crore. The streaming costs incurred for data stored in cloud-based servers is recurring and depends on the usage. If, say, 40 crore school-going students in India

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stream data for two hours in a day or a week, the costs will run into several hundred crores,” the MeitY official added.

In Assam, for instance, the PAL was adapted in 200 schools from Classes 6 to 10. Each school had nearly 200 students, and Embibe provided 10 devices per school. “After implementing the project for two years, Assam discontinued it, citing lack of funds,” the Jio official said.

Similarly, in Haryana, after floating the tender, the State government said Embibe’s quote for streaming content was too high, and the process of adopting PAL came to a standstill. “For implementing the PAL project in the whole State, we had estimated a yearly streaming cost of ₹27 crore, considering on an average one child in a week sees four videos of 15 minutes on the platform. This cost was felt to be very high by the government,” the Jio official said.

Poll-bound State Madhya Pradesh, too, is mulling over introducing PAL for students from Classes 6 to 10 on its flagship State education portal, the CM-RISE. Apart from PAL, MeitY is also considering the introduction of voice commands in DIKSHA 2.0 as a part of AI-enabled learning. “Just like ChatGPT, the student can access summaries of chapters by giving voice commands and so on,” the MeitY official said.

“The process of making PAL is time consuming and it will still take three to four years to develop the tech and roll it out for use,” the source added. The NeGD will float an Expression of Interest to assess the market for edtech companies that can help launch PAL and possibly integrate it with DIKSHA 2.0.

## KOTA SUICIDES: OUR CHILDREN ON THE BRINK

A spate of teenage suicides in Kota, Rajasthan, the mecca of students competing to crack the various entrance exams that will get them their coveted seat in an engineering or medical college, has hit the headlines in the last few days. Amidst celebrations for Chandrayaan 3’s success and the grand preparations for the G20 summit in the capital, this news has raised uncomfortable questions about our ability to understand and look after our young people. Kota, which had already developed a reputation for student suicides in the last decade or more — having lost more than 100 young people in the last 10 years — has seen a sharp rise in its tragic numbers; 23 had died by suicide till August 27. With 100,000 students coming to reside and train at the coaching institutes in Kota every year, these rates of suicide are disturbingly high.

In absolute numbers though, they remain a tiny fraction of the number of young people who kill themselves annually in India. Suicide is the number one cause of death amongst those between 15 to 30 years of age — by far the highest in the world in this age group. The National Crime Records Bureau (NCRB) reported, in 2020, that a student took their own life every 42 minutes; or, in other words, 34 students died by suicide every day. In the same year, 11,396 children below the age of 18 had ended their lives.

And yet, while celebrity suicides become front-page news and farmer suicides become the subject of political slugfests every now and then, the disturbing magnitude of student and youth suicides hardly ever registers in the national consciousness. It’s as if we do not want to face up to this jarring reality that is likely to expose the shameful negligence of our children’s emotional needs and vulnerabilities in our society. Suicide or suicidal behaviour is the culmination of various influences ranging from biological, socioemotional, cultural, political and issues of social justice. For young people, this may reflect in developmental differences, family and parental expectations,





the exacting education system they can't escape, and the othering or marginalisation that some have to face due to their race, religion or socio-economic background. Every time we, as adults, ignore or fail to recognise these intersectional nuances and the profound ways in which they affect our children, we let them down. And these add up, sometimes over months and years, till they reach a point of hopelessness and despair. A mental health disorder might creep in at some point in this trajectory, but it is not an essential precursor of suicidal behaviours.

Going through the tragic stories from Kota this year, I was struck by some common themes. Most of the students come from UP and Bihar, often from lower-middle/middle class backgrounds. Considered the academically bright ones within their schools and communities in small towns, they are catapulted into this gruelling rat race with promises of making it big and the pledge of pulling their families out of their restricted lives and opportunities. Little do they know about the juggernaut that will crush them for the next few years.

The Kota coaching industry is estimated to be worth a whopping Rs 12,000 crore, and one thing that is clear is that it is not interested in student welfare. It is interested in extracting the most out of the thousands of students and their families, both financially and in the form of results; results that will add to their hubris and give them faces to fill the full-page advertisements in national newspapers aimed to attract the next batch of innocent children and ambitious families. They crank up the competition through weekly tests, sending the marks to parents each time, giving more attention to the better performers, and turning a blind eye to kids who slip through the cracks. Hapless students find themselves caught in 12-hour work schedules, seven days a week, with no respite or relief. Away from their families and friends, they have no one to turn to during periods of distress and self-doubt. Neither is there any mechanism to identify and accept individual differences, safe spaces for students to share and support each other, nor any compassionate, benevolent faculty who will take students under their wings. The deep sense of failure, guilt and helplessness spirals out of control for some to a point of no return.

The pandemic has opened up the floodgates of mental health problems across all communities and turned the spotlight on this vastly neglected space of human suffering. While statistics showing depression to be the number one cause of disability in the world were doing the rounds even before Covid-19, there was abject apathy towards mental health conditions in India. The annual budget of the National Mental Health Programme was a mere Rs 40 crore before Covid struck; it has increased more than threefold to Rs 134 crore for the year 2023-24. The Rajasthan government appears to have taken a proactive stance with the crisis in Kota and promises to investigate and find solutions. While these may be welcome changes in the right direction, one thing is for sure — knee-jerk reactions and band-aid solutions like fans with springs, CCTVs and punitive action against scapegoats are not going to bring any lasting change. What is required is a much deeper and continuing engagement with all stakeholders, including parents, educators, pivotal institutions, policymakers, professionals, people with lived experiences and young people who have faced the brunt of these tumultuous times and survived. As adults, we can make a difference, as long as we are able to witness and undertake the journey with our children, and be there when they need us the most.

## STATUS OF THE RIGHT TO INFORMATION ACT

### The story so far:

For 13 years, the Right to Information Act, 2005, helped citizens obtain information and data from Central and State institutions that are not readily available in the public domain. The RTI Act

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allows any citizen to make requests for access to data, documents, and other information in the government's possession. India's RTI Act has been commonly cited as among the most comprehensive public records access legislations in the world. In recent years, though, activists worry that the system is being made less and less effective, shutting off a crucial means to hold public officials accountable.

#### **Has the RTI Act been amended?**

Apart from allowing certain information to be kept secret for national security and sovereignty reasons, the RTI Act makes one exemption — it prohibits the personal data disclosure of citizens by the government, unless there is an overriding public interest in doing so.

The Digital Personal Data Protection Act, 2023, amended this qualified prohibition into a total prohibition. However, the National Campaign for Peoples' Right to Information (NCPRI) argued that it would make 'social audits' in ration distribution impossible to carry out. In social audits, a community member gets a list of ration beneficiaries through an RTI request, and individually verifies that the beneficiaries got what they appear to have received on paper. There are also concerns that powerful public officials would evade accountability by invoking this blanket ban on disclosing personal information.

Past amendments to the RTI Act have also raised concerns. The Right to Information (Amendment) Act, 2019 gave the Union Government unilateral power in deciding how long information commissioners, who hear appeals against unsatisfactory or absent RTI responses, can serve, and what their salaries are.

#### **How else is the RTI Act undermined?**

The RTI Act itself isn't the only way activists see the transparency it has ushered in undermined. The RTI Act's implementation is dependent on subordinate rules made by the Union Government and State Governments. For instance, the simple matter of what payment method a public authority can accept is left to the States to decide. Some States like Tamil Nadu do not accept Indian Postal Orders (IPOs), which are cheques that can be bought at post offices and attached to an application as payment. IPOs are generally the easiest payment method to obtain. Other payment methods are less convenient or otherwise burdensome — court fee stamps can only be purchased at a courthouse, and a demand draft for ₹10 may require a processing fee that is over twice that amount.

Tardy appointments to information commissions — the Central Information Commission (CIC) for the Union Government, and various State Information Commissions (SICs) — have also undermined confidence in the RTI framework, as appeals can take months or even years to be heard, if ever. For example, the Jharkhand SIC has had no commissioners to hear appeals since May 2020, essentially suspending the ability to appeal ineffective administration of the RTI Act in the State.

#### **What about online RTIs?**

Allowing RTI applications to be filed online largely removes some barriers — instead of obtaining uncommon financial instruments, citizens can simply file a request online and pay with UPI. However, many States do not have an online RTI portal, and even if they do, it is common for many State Government bodies to simply not be registered on the portal.



The Union Government's RTI portal — launched in 2013 — is also past its prime. While many public authorities under the Union Government are on the portal, filing applications on it has become harder. Having an account on the RTIOnline portal allowed citizens to have their personal particulars filled in on each application by default. Now, however, the facility to create an account has disappeared, and the site forces all users to enter their particulars afresh each time they file an application. Further, past data of applicants has been stuttering in and out of the portal. In August, data of applications filed by users before 2022 disappeared without a trace, and after The Hindu reported this, the Government restored the applications.

#### What next?

Beyond the evident structural problems that institutions and websites for RTI pose, dissatisfaction is growing at the most basic level. More and more first appeals are being filed, Venkatesh Nayak, Director of the Commonwealth Human Rights Initiative NGO, said in an analysis of the newest report by the CIC. This indicates, according to Mr. Nayak, that people are increasingly dissatisfied with the information they are receiving from public officials. While activists have long warned of the weakening of the RTI Act, most of the damage they have seen is not merely from changes in the text of the law, but from the ways that various institutions across different Government apparatuses discharge their duties, in the narrowing of avenues to conveniently file requests and obtain information after doing so, and having appeals fall on unstaffed appellate bodies.

## LAWS GOVERNING FORESTS OF THE NORTHEAST

#### The story so far:

On August 22, the Mizoram Assembly unanimously passed a resolution opposing the Forest (Conservation) Amendment Act, 2023, "to protect the rights and interest of the people of Mizoram". The amendment allows the diversion of forest land for roads, railway lines or "strategic linear projects of national importance and concerning national security" within 100 km of India's international borders or lines of control, without a forest clearance under the Forest (Conservation) Act (FCA) 1980. Most of India's Northeast falls in this 100 km range. When it meets next week, the Nagaland Assembly will also face strident demands to pass a resolution against the Amendment. Tripura, Mizoram, and Sikkim — ruled by the Bharatiya Janata Party (BJP) or its allies — have also opposed the 100-km exemption clause.

#### Is FCA applicable to the Northeast?

Special constitutional protections, such as Article 371A for Nagaland and 371G for Mizoram, prohibit the application of any law enacted by Parliament that impinges on Naga and Mizo customary law and procedure, and ownership and transfer of land and its resources. Such laws can be extended to these States only if their Legislative Assemblies decide thus in a resolution.

In 1986, Nagaland extended the application of the FCA "to government forests and such other forests and Wildlife Sanctuaries under the control of [the] State Government". Government forests make up only 2.71% of the State's Recorded Forest Area. However, in December 1997, the Home Ministry, in consultation with the Ministry of Law and Justice, confirmed to the Union Environment Ministry that the FCA is covered under the term "land resources" and is not applicable to Nagaland, as its Legislative Assembly had not adopted any resolution to apply FCA to the State. Later, in November 1998, the Environment Ministry contradicted itself, when it



informed the Nagaland government that FCA is indeed applicable to the State as clarified by the Ministry of Law and Justice. Nevertheless, since 1980, the Environment Ministry has not granted an FCA clearance to forests in Nagaland.

This is not so with Mizoram. In 1986, the Union Territory became a State with the 53rd amendment of the Constitution, adding Article 371G to the Constitution. It stipulated that all Central Acts in force before 1986 are extended to the State, including the FCA. Moreover, the powers of the Autonomous District Councils in the three Sixth Scheduled areas in Mizoram don't extend to reserved forests. So, the FCA covers 84.53% of forest areas that are notified forests, and 6,630 ha have thus far received FCA clearance.

Moreover, the FCA is applicable in the rest of the Northeast — in Meghalaya and Tripura, the Sixth Schedule Areas within these States, and in Arunachal Pradesh, Sikkim, and Manipur. Arunachal Pradesh ranked first among these States in FCA clearance (21,786.45 ha), followed by Tripura (9,051 ha), Assam (5,261 ha), Manipur (3,604 ha), Sikkim (2,902 ha), and Meghalaya (807 ha).

#### **What is RFA?**

Over a million hectares of forest have been diverted nationwide under FCA since 1980. FCA exists to deforest the forest, under the Indian Forest Act 1927 or its State versions. In 1996, the Supreme Court expanded the term “forest land” in the FCA in the Godavarman case to “not only include ‘forest’ as understood in the dictionary sense, but also any area recorded as forest in the Government record irrespective of the ownership”, thus extending the FCA to unclassified forests. These are recorded forests but not notified as forests. More than half of the Northeast is Recorded Forest Area (RFA). Of this, 53% are unclassified forests controlled by individuals, clans, village councils or communities, and governed by customary law and procedures. The remainder is notified forest controlled by State Forest Departments.

RFA ranges from 34.21% in Assam to 82.31% in Sikkim with Mizoram having 35.48%, Meghalaya 42.34%, Nagaland 53.01%, Arunachal Pradesh 61.55%, Manipur 78.01% and Tripura 60.02%. Of these, unclassified forests range from nil in Sikkim to 97.29% in Nagaland, with 15.47% in Mizoram, 33.43% in Assam, 42.96% in Tripura, 75.67% in Manipur and 88.15% in Meghalaya.

The apex court's 1996 order brought unclassified forests under the FCA's purview everywhere. There are also forests outside RFA, neither recorded nor surveyed — 38.5% of the forest in Assam; 29% in Nagaland; and 1.5% in Mizoram.

#### **What is the FRA Act?**

In the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (FRA) 2006, “forest land” includes unclassified forests, undemarcated forests, existing or deemed forests, protected forests, reserved forests, Sanctuaries and National Parks. This complied with the 1996 Supreme Court redefinition.

While this benefits most northeastern States, due to the sizeable unclassified forests, the FRA also included a specific provision in the list of rights: “rights which are recognised under any state law or laws of any autonomous district council or autonomous regional council or which are accepted as rights of tribal under any traditional or customary law of the concerned tribes of any State.” Nothing prevents these States from taking suo motu cognisance of these existing rights and obtaining the concerned Gram Sabha approvals for issuing titles. The Ministry of Tribal Affairs can



also issue legally enforceable directions under Section 12 of the FRA, paving the way for this. It would add another layer of legal security to traditional community tenurial rights over forests.

However, none of the Northeast States have implemented FRA except for Assam and Tripura. The reasons include the FRA being 'irrelevant' as communities, clans, chiefs and individuals own most of the land, that their rights are already being enjoyed and a lack of forest-dwellers who are totally forest dependent.

While the Mizoram Legislative Assembly resolved on October 29, 2009, under Article 371G, to extend the FRA and its Rules with effect from December 31, 2009, it did a U-turn on November 19, 2019, declaring the FRA to not be relevant to the State since no claims for rights were forthcoming. It also referred to the Ministry of Tribal Affairs declining to sanction ₹10 lakh to implement the FRA.

The Nagaland Assembly, as required under Article 371A, is yet to decide whether it wants this law. A committee has been looking into it for years now.

#### **How can forests then be protected?**

The Environment Ministry mandated FRA implementation and prior informed consent of the Gram Sabha in 2009 to admit a forest diversion proposal. The responsibility was delegated to the District Collector, who ironically also headed the District Committee that issues FRA titles. The Collectors' certificate of FRA compliance in the in-principle Stage I forest clearance was shifted to Stage II final clearance.

But the Ministry's 2022 Forest Conservation Rules eliminated compliance with the FRA before final approval altogether. Instead, it said that State governments "shall issue order for diversion, assignment of lease or dereservation as the case may be ... after fulfillment and compliance" with the FRA "including ensuring settlement of rights".

Taking this further, States can formulate and take legal measures to ensure mandatory fulfillment of the FRA before recommending a forest diversion proposal, and ensuring Gram Sabha consent before handing over forest land. The Ministry of Tribal Affairs can also issue legally enforceable directions under the FRA, or even enact a separate law, to recognise and settle forest rights when forests are diverted for other purposes and forest-dwellers are relocated, as forest rights fall squarely within its Business Rules. This way, the States and the Tribal Affairs Ministry have a way to provide tenurial security to forest-dwellers and protect the forests.

### **THE NORTHERN PLAINS OF INDIA IS THE MOST POLLUTED REGION**

Data from the Air Quality Life Index 2021 shows that failure to meet the World Health Organization (WHO)'s guidelines on reducing PM2.5 (particulate matter) pollution to 5 g/m<sup>3</sup> would cut global life expectancy by 2.3 years. AQLI data emphasises that ambient particulate pollution poses the world's greatest external risk to human health.

South Asia is at the centre of the crisis. According to AQLI data, from 2013 to 2021, particulate pollution in South Asia surged by 9.7%, which is estimated to reduce life expectancy in the region by an additional six months.

Bangladesh, India, Nepal, and Pakistan, where 22.9% of the global population lives, are the most polluted countries in the world. In Bangladesh, the most polluted country in 2021, people



potentially lost an average of 6.8 years of life due to air pollution not meeting WHO guidelines. In contrast, the average person from the U.S. lost just 3.6 months.

Notably, China stands out due to its success in reducing pollution by a staggering 42.3% from 2013 to 2021 and extending the average life expectancy of its population by 2.2 years. This reduction can be attributed to the country's policy initiatives to combat pollution in 2014.

In India, the second-most polluted country in the world in 2021, particulate pollution is the greatest threat to human health. Data reveal a further rise in PM<sub>2.5</sub> pollution from 56.2 g/m<sup>3</sup> in 2020 to 58.7 g/m<sup>3</sup> in 2021, exceeding the WHO guidelines by more than 10 times. The average Indian resident is set to lose 5.3 years of life expectancy if WHO guidelines remain unmet. In contrast, cardiovascular diseases reduce the average Indian's life expectancy by about 4.5 years, while child and maternal malnutrition reduces it by 1.8 years.

In Delhi, the world's most polluted city, 18 million people could lose 11.9 years of life expectancy relative to the WHO guideline and 8.5 years of life expectancy relative to the national guideline if current pollution levels persist.

The northern plains, home to over half a billion people and 38.9% of India's population, is the most polluted region. The northern plains include the States and Union Territories of Bihar, Chandigarh, Delhi, Haryana, Punjab, Uttar Pradesh, and West Bengal.

In the northern plains, the average resident is set to lose about 8 years of life expectancy if pollution levels persist and policies do not succeed in reducing pollution to levels as prescribed by the WHO.

Pollution, once concentrated in the northern region, has spread to other parts of the country over the last two decades. For instance, in Maharashtra and Madhya Pradesh, which have a combined population of 204.2 million, pollution has surged by 76.8% and 78.5%, respectively, since 2000, causing a loss of an additional 1.8 years to 2.3 years of life expectancy compared to 2000 levels.

AQLI's life expectancy calculations are based on a pair of peer-reviewed studies, Chen et al. (2013) and Ebenstein et al. (2017), co-authored by Michael Greenstone. These studies compared two population subgroups exposed to different levels of particulate air pollution. This method effectively isolated the impact of particulate air pollution from other health factors. Ebenstein et al. found that sustained exposure to an additional 10 g/m<sup>3</sup> of PM<sub>2.5</sub> reduces life expectancy by 0.98 years.

## TIME TO DECIDE

The destruction wreaked by the floods in north India in August has evoked concern at the highest levels. Last month, a Bench headed by Chief Justice of India D.Y. Chandrachud had suggested that an expert committee conduct a "complete and comprehensive" study on the carrying capacity of the Himalayan region. Following this, the Centre has proposed setting up a 13-member technical committee. "Carrying capacity" is a concept derived from population-biology and generally refers to the quantity of a species that can thrive sustainably in a defined ecosystem. Generally, population exceeding capacity will lead to a natural decline in numbers, as witnessed when grasslands or overgrazed or invasive species throttle existing biome. Applying these ideas in the context of hill-stations and Himalayan States — the challenge is between balancing rising population, infrastructural needs and the precarious geography — is bound to be a challenging enterprise. Going by recent history, it is unlikely that a disinterested scientific opinion will be

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palatable to every stakeholder in the Himalayan States. Following the devastating floods in Uttarakhand in 2013, the Supreme Court had appointed a committee of experts to evaluate the role of hydropower projects in the State. While the committee's reports did influence a reduction in the proposed hydro projects, they failed to restrict road-widening projects and the carving up of mountainsides in ways that were deemed unsuitable for the topography.

The latest proposal by the Centre is not new; as far back as 2020, it had circulated, among the 13 Himalayan States, guidelines to assess the carrying capacity of their hill stations, cities and eco-sensitive zones. The Environment Ministry had in May reminded all the States to undertake such a study and submit them "as early as possible". The crisis of land subsidence experienced in Joshimath, Uttarakhand, in January had also sparked a debate on the conflict between infrastructural development and ecology, but in a matter of months, Himachal Pradesh saw an unexpected deluge washing away roads and highways built on denuding mountains. More committees and reports will not change the reality that infrastructure development in the hills cannot be executed as in the plains. Either States must bear the higher cost that comes from building more sustainably and minimising the risk to denizens, or designate regions as no-go zones. The latter has for decades provided fertile ground for political opportunism. As unequivocal scientific evidence concludes, the option to kick the proverbial can down the road no longer exists.

#### AFTER LARGE RAINFALL DEFICIT IN AUGUST, HOW INDIA'S RESERVOIR LEVELS ARE FALLING CONSIDERABLY

The large deficit in rainfall in August, more than 35 per cent, has had an expected impact on the water storage in the country's reservoirs. The cumulative amount of water in the 150 large and important reservoirs fell below the normal level in August — the first time this has happened since the beginning of the current southwest monsoon season.

The latest data from the Central Water Commission (CWC) show that these 150 reservoirs across the country had about 113 billion cubic metres (BCM) of water as on August 31, which was about 10% below the normal — or average of the last 10 years — storage at this time of the year.

The biggest deficit, unsurprisingly, is in the reservoirs of the southern states, where the rainfall deficiency in August was the largest in the country. The 42 large reservoirs in this region together held about 53 BCM of water on August 31, which represents 49% of their combined capacity.

In the normal course, these reservoirs are full to about 67% of their combined capacity at this time of the year.

Since the bulk of India's annual rainfall — nearly 75% — comes during the four-month southwest monsoon season, these reservoirs are a crucial source of water supply for the rest of the year, catering not just to households and industrial uses, but also for power generation.

August is usually the month when these reservoirs see their storage levels going up. August is the year's second rainiest month, accounting for nearly 22% of the annual rainfall. July, the rainiest month, contributes 24%.

But August 2023 was the driest August in the more than 120 years for which records are available. The month produced only about 162 mm of rain in the country as a whole, instead of the almost 255 mm that is expected, a deficiency of 36%.



Central India had a rainfall deficiency of 47%, while South India had a 60% deficit in August. The East and Northeastern region was the only one that received normal rainfall. Not surprisingly, this is also the only region where water levels in the reservoirs did not show a declining trend in August.

The dry August also resulted in an unexpected increase in power demand, mainly for irrigation activities. Power generation touched a record high in August, Reuters reported. Because water levels in the reservoirs were already precarious, this extra demand could not have been met through hydropower — it was, therefore, met through additional generation by coal-fired power plants.

The Reuters report said the share of coal in India's total power generation increased to 66.7% in August, the highest for the month in six years. The burning of extra coal is bad optics from the perspective of international climate change discussions, even though India has insisted that it would continue to rely on coal for its electricity demand in the foreseeable future.

The first half of September is expected to bring decent rainfall, especially in the southern region — and this might result in an improvement of the situation of the reservoirs. Many parts of South India have already experienced good rainfall in the first five days of the month.

The India Meteorological Department (IMD) has predicted that rainfall in September would not be more than 10% deficient, but the El Niño in the equatorial Pacific Ocean, which is still gaining in strength, continues to be a major threat.

## BRIDGING THE MALNUTRITION GAP, THE BEMETARA WAY

Over the years, the government has made painstaking efforts to ensure food security. Now, children have mid-day-meals in their schools and people receive monthly rations through an ever-improving Public Distribution System. Ready-to-eat packets and hot meals are served to mothers and children at Anganwadi Centres (AWCs), under the Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN) Abhiyaan. Further, various add-ons such as egg, banana, protein powders, peanut chikki and jaggery are also being distributed under various special State-specific schemes, an example being the Mukhyamantri Suposhan Yojana in Chhattisgarh. But, nutrition security is still a distant dream. People often lack knowledge of proper eating and feeding practices. Myths around food and increased accessibility to highly processed food have compounded the problem. Nutrition counselling can potentially be the answer to this problem.

It is important to note that "Jan Andolan", or social and behaviour change communication (SBCC), has been a facet of POSHAN Abhiyaan. This includes bicycle rallies, plantation of Poshan Vatikas, celebration of Poshan Maah, Poshan Pakhwaras and Godh Bharaais. Different States have held various awareness programmes under the SBCC. However, the concept of nutrition counselling has yet to be properly institutionalised and implemented uniformly across States. In fact, according to the POSHAN Abhiyaan Progress Report, 2018, "A focused and coherent SBCC Action Plan is essential to take the work of POSHAN Abhiyaan forward." Thus, there is a need for field staff to be properly trained in nutritional counselling and there is a need for it to be implemented, mandatorily and uniformly, by States.

### Lessons from Bemetara

Bemetara in Chhattisgarh is a puzzling district in the context of its malnutrition status. Situated in the fertile plains of Chhattisgarh, it is unaffected by Naxalite activities and is agriculturally rich.

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





Its inhabitants are also relatively affluent. However, the number of Severe Acute Malnourished (SAM) children there was as high as 3,299 in December 2022. This figure bears a striking resemblance to the situation in tribal-dominated and Naxal-affected districts such as Bastar. It points to the lack of proper knowledge about feeding practices. The problem is not about access but improper knowledge around when, how and what to eat. This is why nutrition counselling combined with robust monitoring was chosen as the modus operandi for this area.

Poth Laika Abhiyaan — which means “Healthy Child Mission” (literal translation) in the Chhattisgarhi language — is a nutrition counselling programme that is being implemented in 72 of the most affected AWCs in the Bemetara sub-division of Bemetara district. It has the technical support of UNICEF, Chhattisgarh. Here, ground-level staff from the Health and Women and Child Development departments have been well trained on how to provide nutrition counselling in the region. Every Friday, the parents of the targeted SAM and Medium Acute Malnourished (MAM) children are summoned and counselled. They are taught in simple Chhattisgarhi language the importance and the constituents of “Tiranga Bhojan” (a balanced diet), the need to wash hands regularly and many other tips in order to lead a healthy lifestyle. Many harmful dietary myths and superstitions are dispelled as well. The progress of the targeted children is being monitored. Local leaders such as sarpanchs, panchayat sachivs and religious heads have also participated in the counselling sessions. Door-to-door visits to the houses of targeted children are also done to monitor their progress.

#### **Data that is encouraging and significant**

As a result of the simple mantra of nutrition counselling along with regular monitoring and evaluation, as many as 53.77% of targeted children were brought out of malnutrition by the Poth Laika Abhiyaan, in a span of nine months, i.e., from December 2022 to July, 2023 — 599 out of 1,114 children. Further, 61.5% of MAM children and 14.67% of SAM children have been brought out of malnutrition. These figures are both encouraging and statistically significant. When comparing this with a random control group of 20 AWCs where this mission was not being implemented, only 30.6% children were taken out of malnutrition. That is, 33.8% MAM children and zero SAM children were taken out of malnutrition. This shows a total increase of 23% over and above the control group, which is very encouraging. Further, while providing meals requires elaborate budgeting and the risk of leakages, this mission is a zero cost one, requiring no more than a few training sessions and regular monitoring. Thus, it has shown itself to be cost effective as well.

From the experiences highlighted, there is no doubt that this model needs to be replicated on a larger scale across districts and States. Providing food to the poor needs to be supported with nutrition counselling and monitoring in order to truly accelerate the eradication of malnutrition.

It is only when this simple but impactful strategy of nutrition counselling is followed both in letter and spirit, that India can move closer towards achieving the ambitious yet noble dream of a “Kuposhan Mukh Bharat”.

### **A RIVERSIDE CITADEL TO AN INFAMOUS PRISON FOR MULTIPLE EMPIRES: THE 16TH-CENTURY FORT IN SHADOW OF LAL QILA**

Delhi is a city steeped in history but few monuments have seen the passage of time as closely as the oft-ignored Salimgarh Fort. Nestled along the banks of the Yamuna River in the heart of Delhi,



Salimgarh Fort stands as a silent witness to the ebb and flow of empires, political intrigues, and the relentless march of time.

Built in 1546 by Sher Shah Suri's son Salim Shah Suri to protect the Sur kingdom's territory from Humayun's army, who had been dislodged from his throne six years prior, the fort was strategically located on a riverine island bulwarked by the Yamuna on one side and the Aravallis on another. However, the defence did not last for long and Humayun defeated Sikander Shah Suri in 1555 after returning from his self-imposed exile. Salim Shah never lived to see the fort being completed.

According to Alfred Frederick Pollock Harcourt's travelogues, so humiliated was Humayun by the betrayal of the Surs that he decreed the fort be renamed to Nurgarh. Few records exist of what happened to the fort between the reigns of Humayun and Shah Jahan.

During Jahangir's reign, a bridge was built connecting the fort to the mainland; before that, the jagir of the fort was handed over to a Mughal noble named Murtaza Khan during Akbar's reign, according to Gordon Sanderson and Maulvi Shuaib's *Delhi Fort: A Guide to the Buildings and Gardens*.

Under the rule of Aurangzeb, it was converted into a prison where he infamously held his brother Murad Bakhsh after he helped the former win the war of succession against their elder brother and Shah Jahan's heir apparent Dara Shikoh. Aurangzeb's daughter Zeb-un-Nissa also spent the last 20 years of her life writing poems of love and devotion, which were later compiled into the *Diwan-i-Makhfi*, whilst languishing in the cellars of the Salimgarh Fort.

The fort's role as a prison was briefly interrupted during the 1857 revolt. British civil servant Herbert Charles Fanshawe recounted in his book *Delhi Past and Present* how rebel soldiers marched from Meerut to Delhi to proposition the ailing Mughal emperor Bahadur Shah II to once more take up the helm of leadership over India. Bahadur Shah II would apparently hold regular durbars in the Salimgarh Fort, where the mutineers had set up camp. As the situation slowly devolved and the English took over, it was converted into an army camp.

During the Second World War, the fort was used to imprison Indian National Army soldiers who were subjected to unspeakable horrors and many were tortured to death.

Today, the fort sits quiet and unnoticed in the shadow of the grander, and more famed, Red Fort. Perhaps, with the premises being spruced up in light of the G20 Summit, the Salimgarh Fort will find new life and new visitors.

#### G20 LEADERS' SUMMIT: NGMA TO HOST BIGGEST SHOWCASE OF RARE ANTIQUITIES FROM ACROSS THE COUNTRY

IN THE summer of 2018, the Archaeological Survey of India (ASI) had stumbled upon a 4,000-year-old chariot during excavations in Uttar Pradesh's dusty hamlet Sanauli.

The find, the ASI said, had the potential to "recalibrate" India's position on the map of ancient history. In fact, this chariot was found to have many similarities with those unearthed in Mesopotamia, shedding light on the progress the Indian civilisation had made at the time, on par with the 2000 BC Mesopotamia.



To highlight this to the world during the upcoming G20 Leaders' Summit, the remains of this chariot have been brought to Delhi's National Gallery of Modern Art (NGMA), as part of an exhibition of hundreds of such landmark objects that aims to put India's civilisation glory on the world map.

On September 9, as talking heads of the world deliberate upon geopolitics, food security and mitigation of conflicts at Bharat Mandapam, less than 2 km away at NGMA, their spouses will inaugurate "an exhibition dedicated to India's civilisation prowess and artistic excellence", titled 'Roots and Routes: Past Present and Continuous', being put together by the Ministry of Culture.

The 500-piece exhibition will also display Indian antiquities and sculptures (some even 2,500 years old), pre-modern paintings and manuscripts, sourced from various central government museums and galleries and ASI's site museums, becoming the first-ever showcase that puts up all these priceless objects at one place. All the works being displayed here are originals from various government repositories, an official told The Indian Express.

The exhibits will take up almost the entire 12,000 square metres of exhibition space at NGMA, which is one of the largest modern art museums in the world. "The exhibition traces India's roots and also explores interconnectedness — both within India and of India with the world," the official said.

Some works have been brought on loan from the Indian Museum in Kolkata, which is among the oldest museums in the country; the Government Museum in Chennai; the National Museum in Delhi; the Mathura Art Museum; and the Government Museum and Art Gallery in Chandigarh. The museum in Chandigarh has sent 19 Gandhara sculptures, three terracotta sculptures from Akhnoor, two Buddhist metal sculptures of Nagapattinam and two Pahari miniature paintings for the exhibition.

From Chennai, a selection of Buddhist relics of Amaravati and Chola bronzes have been received for the showcase. A body of bronze-cast sculptures made during the 10th to 13th centuries in southern India, Chola bronzes are especially known for depictions of Lord Shiva as Nataraja.

The 2,000-year-old Amaravati marbles, also from Chennai, are the remnants of a Buddhist stupa built by the Satavahana kings, and are considered among the oldest Buddhist art in the world. In recent years, India has been positioning itself as 'the birthplace of Buddhism', calling on tourists from around the world to visit the Buddhist Circuit, retracing the steps of Lord Buddha's life and times through seven sites in the country.

Sources say since restitution and repatriation of cultural heritage is among the major themes of the cultural track of India's G20 Presidency, Indian antiquities will be showcased in all their glory. During the first G20 Culture Working Group meeting in Khajuraho earlier this year, the government had organised a special exhibition dedicated to repatriated antiquities.

Officials said the exhibition has sections dedicated to India's democratic ethos, shared traditions and outreach, also to sustainability and environment, in alignment with various G20 themes. "The Ministry of Culture has identified some of the most iconic artworks from across the country, and requested their loan for the exhibition," they said, adding that the National Museum, New Delhi, is the nodal agency for handling the insurance and transportation of these works.



## THE LORD OF DANCE: HISTORY AND SYMBOLISM OF SHIVA'S NATARAJA FORM

The magnificent Nataraja sculpture that has been installed at Bharat Mandapam, venue of the G20 Leaders' Summit, portrays Lord Shiva in a form that was first seen in the fifth century AD, but which was made iconic under the Great Cholas

Greeting G20 leaders in front of Bharat Mandapam in New Delhi's Pragati Maidan this weekend will be a magnificent 27-foot Nataraja, the tallest statue of Lord Shiva's dancing form in the world.

The statue is an ashtadhatu (eight-metal alloy) piece of art, crafted by sculptors from Swamimalai in Thanjavur district of Tamil Nadu. Weighing about 18 tonnes, it was hauled across the country on a 36-wheel trailer.

Srikanda Sthapathy, 61, who crafted the statue along with his brothers, told The Indian Express that the design draws inspiration from three revered Nataraja idols — the Thillai Nataraja Temple in Chidambaram, the Uma Maheswarar Temple in Konerirajapuram, and the Brihadeeswara (Big) Temple, a UNESCO World Heritage Site, in Thanjavur.

This is how the statue was sculpted, and the history and religious symbolism of Lord Shiva's dancing form.

### **The Cholas and Nataraja**

All three temples the Bharat Mandapam Nataraja statue is inspired from were originally constructed by the Cholas, who at their peak around the 9th-11th centuries AD, ruled over much of peninsular India.

The Cholas were great patrons of art and high culture. Historian of art and culture and Emeritus Professor at the University of Sussex Partha Mitter wrote in 'Indian Art' (2001): "Chola art and architecture in South India was a product of a prosperous, highly efficient empire during the period of its greatest territorial expansion."

The Cholas were devout Shaivites, building elaborate Shiva temples (like the one in Thanjavur) across their territories. "Among icons which form the most important part of Chola sculpture, Shaiva figures predominate...although very fine Vaishnava and Jain images are not unknown," K A Nilakanta Sastri, the pioneering historian of South India, wrote in The Cholas (1937).

Although Shiva was first portrayed in sculpture as Nataraja in the fifth century AD, its present, world-famous form evolved under the Cholas. "The Nataraja image in its various forms...holds the first place among Chola bronzes," Sastri wrote. While stone images of Nataraja are not uncommon, it is the bronze sculpture that has had the greatest cultural resonance through the years.

### **Shiva as the Lord of Dance**

Shiva, as he is worshipped today, evolved from the Vedic deity Rudra. In many ways, he is the most complex god of the Puranic pantheon.

"He is death and time (Mahakala) which destroys all things. But he is also a great ascetic and the patron of ascetics generally," the great Indologist A L Basham wrote in his classic 'The Wonder that was India' (1954). Shiva is also the 'Lord of Dance' or Nataraja, who is said to have "invented no less than 108 different dances, some calm and gentle, others fierce, orgiastic and terrible," Basham wrote.



In a typical portrayal, Nataraja is encompassed by flaming aureole or halo, which Sastri interpreted as “the circle of the world which he [Nataraja] both fills and oversteps”. The Lord’s long dreadlocks flare out due to the energy of his dance, and he strikes a rhythmic pose with his four arms.

In his upper right hand He holds a damru (a hand drum), whose sounds “draw all creatures into his rhythmic motion”, and in his upper left arm, he holds agni (fire), which he can wield to destroy the universe, Sastri wrote. Beneath one of Nataraja’s feet lies crushed a dwarf-like figure, representing illusion, which leads mankind astray.

Yet, amidst all the destructive symbolism, Nataraja also reassures, and shows Shiva as the Protector. With his front right hand, he makes the ‘abhayamudra’ (a gesture that allays fear), and with his raised feet, and with his front left arm he points to his raised feet, asking his devotees to seek refuge at his feet. Strikingly, Nataraja almost always wears a broad smile.

“He smiles at death and at life, at pain and at joy alike, or rather...his smile is both death and life, both joy and pain,” the French historian Renee Grousset wrote describing Nataraja (quoted by Sastri in ‘A History of South India’, 1955).

#### **The lost wax method**

The sculptors who created the 27-foot-tall Bharat Mandapam Nataraja trace their lineage 34 generations back to the Cholas. The process used has also been passed down from the time. “The crafting process adopted was the traditional ‘lost-wax’ casting method, indigenous to the Chola era,” Sthapathy told The Indian Express.

In fact, the lost-wax method can be dated back to at least 6,000 years back — a copper amulet crafted using this method at a neolithic site in Mehrgarh, Balochistan (present day Pakistan) is dated to circa 4,000 BC. Notably, the Dancing Girl of Mohenjo Daro was also crafted using this technique.

For millennia, the lost wax method was the foremost technique to produce elaborate metallic sculptures, and the Cholas took this skill to its zenith.

In this method, first, a detailed wax model is made. This is then covered with a paste made of alluvial soil found on the banks of the Cauvery river that runs through the heart of what was Chola country. After this coating, applied multiple times, has dried, the figure is exposed to high heat, causing the wax to burn away, leaving a hollow, intricately carved mould. This is ultimately filled by molten metal to produce the sculpture.

For master artisans like Sthapathy, this method is second nature. Yet the sheer scale of the Nataraja sculpture posed a challenge unlike any other. The project took a total of seven months to complete and cost around Rs 10 crore.

**BUSINESS & ECONOMICS****OPPORTUNE MOMENT**

GST revenues have clocked an 11.3% growth in the first five months of 2023-24, with an average monthly kitty of ₹1.66 lakh crore, up from about ₹1.5 lakh crore last year. This uptick, bolstered by the record ₹1.87 lakh crore collected in April, was slightly higher at 11.5% in the first quarter. Over July-August, that growth has slowed to 10.8% and 10.76%, respectively, marking the slowest rise since July 2021. In absolute terms, revenues in August, pertaining to transactions done in July, were at a three-month low of ₹1.59 lakh crore, from a three-month high of ₹1.65 lakh crore in July. On a disaggregated basis, revenues from goods imports rose about 3% in August after two months of contraction, indicating some recovery in discretionary demand. However, revenues from domestic transactions and services imports rose 13.8%, slower than July's 15.1% growth. The festive season could fuel some growth from both revenue sources. But the resurgence of high inflation may skew the momentum towards items preferred by high-income households as those with weaker incomes grapple with the pronounced price rise across food items by cutting back other spends.

The salutary effect of mandatory e-invoicing for firms with an annual turnover over ₹5 crore, excising loose ends in the tax trail, will be visible in this month's revenues. But the festive effect would only be discernible two months from now. Yet, the overall trajectory of GST revenues, boosted by a crackdown on evasion and fake registrations, is buoyant and should dilute concerns about underwhelming collections in initial years of the tax. Moreover, it offers a window to simplify and rationalise the complex multiple rate GST structure as mooted by the GST Council in 2021. Last year, the Finance Ministry indicated the rate rejig will have to wait till inflation subsides. This year, it signalled the rationalisation plan will stay in deep freeze, even before the recent price spike. A ministerial group (GoM), tasked with recommending a new rate structure, is yet to be reconstituted. Even if political bandwidth for the big GST reset is limited and the Centre may want to pitch it as a promise to voters for the next Lok Sabha, waiting that long will hurt growth potential. If done deftly, tax rate changes could also aid the battle against inflation in items of interest for the common man. In any case, this will be a complicated exercise so the dialogue with States must be continued by reviving the GoM, rather than starting afresh a year later.

**25% PMUY CUSTOMERS TOOK NO CYLINDER REFILL OR JUST ONE LAST YEAR**

One out of every four beneficiaries of the Pradhan Mantri Ujjwala Yojana (PMUY), a scheme that aims to make LPG gas cylinders available to rural and deprived households, either did not take any cylinders during 2022-2023 or took just one refill.

The spike in LPG cylinder prices made them an expensive proposition even for subsidised households; rates have almost doubled since 2018, reaching ₹903 a cylinder in March 2023 even after a subsidy of ₹200 per cylinder was offered to PMUY beneficiaries in May 2022.

One in nine PMUY beneficiaries, or over 1.18 crore households, bought no refill cylinders at all last year. Another 1.51 crore beneficiaries bought only one refill cylinder, according to data from three major gas companies — Indian Oil Corporation Limited (IOCL), Bharat Petroleum Corporation Limited (BPCL) and Hindustan Petroleum Corporation Limited (HPCL) — obtained via multiple Right to Information queries.



Between January 2018 and March 2023, there was an 82% spike in the rate of subsidised LPG cylinders. In January 2018, a PMUY household could purchase a subsidised cylinder for ₹495.64; by March 2023, the same cylinder cost ₹903. Factoring in the additional subsidy of ₹200 for the 14.2 kg LPG cylinders for all consumers, announced by Prime Minister Narendra Modi this week, this cylinder will now cost ₹703.

A non-subsidised LPG cylinder of 14.2 kg cost ₹741 in January 2018. By March 2023, the price of the cylinder had increased by 49% to ₹1,103. As the recent ₹200 subsidy is applicable for all consumers, the LPG cylinder for non-PMUY households will now cost ₹903.

The average PMUY beneficiary refilled less than four LPG cylinders during 2022-23. According to the RTI replies, the per household consumption of PMUY beneficiaries for IOCL was 3.53 cylinder refills; for HPCL, it was 3.72 refills; and for BPCL, it was 4.02 refills. This is in sharp contrast to non-PMUY consumers, whose per household consumption of LPG cylinders was 6.67 refills.

Over 70% of the LPG retail price in Delhi is determined by the international Free On Board (FOB) price of LPG. FOB is a weighted average of the Saudi Aramco contract price for Butane (60%) and Propane (40%). Apart from base price, factors such as import charges, bottling charges, freight, delivery charges, GST and distributor commission determine the price of LPG.

## IMPACT OF RBI'S LENDING GUIDELINES

### The story so far:

On August 18, apex banking regulator the Reserve Bank of India (RBI) issued guidelines enabling a borrower to transition from a floating interest rate-based loan to one with a fixed interest rate. According to RBI, the endeavour was to address borrowers' grievances pertaining to the elongation of loan tenure and/or an increase in the EMI amount in the event of an increase in the benchmark interest rate. A lack of proper communication along with the absence of consent formed part of the concerns. The provisions would be extended to existing as well as new loans by the end of the current calendar year.

### What exactly has the RBI instructed?

The apex banking regulator has given borrowers the option to switch over to a fixed (interest) rate mechanism for their loans from floating rates. This would be based on a board-approved policy drafted by the lending entity. The policy must also specify the number of times such a switch would be allowed during the tenure.

The lender must also transparently communicate to the borrower all relevant charges alongside service charges or administrative costs associated with the transition.

The responsibility would rest with the lender to communicate clearly, at the time of loan sanction, the impact emanating from the change in regime (floating to fixed), such as the change in EMI and/or tenure of the loan or both. The borrower would now also have the option to choose between enhancement of the EMI or elongation of the tenure or a combination of both. S/he might also opt to prepay the loan, either in part or full, at any point during the tenure. This would, however, still invite foreclosure charges or pre-payment penalty. Further, the regulator has sought that lending entities provide borrowers, through appropriate channels, a statement at the end of each quarter enumerating the principal and interest recovered till date, EMI amount, number of EMIs left and annualised rate of interest/ Annual Percentage Rate (APR) — for the



entire tenure of the loan. RBI has asked for the statement to be “simple and easily understood by the borrower”.

The instructions would apply to all equated instalment-based loans of different periodicities albeit with certain changes based on the nature of the loan.

**What is the difference between a fixed and floating interest rate?**

Fixed interest rates are those that do not change during the tenure of the loan. On the other hand, floating interest rates are subject to market dynamics and the base rate — therefore, the risk differentiation. As also contended by several lending entities, floating interest rates are generally lower than fixed interest rates. For example, if the floating interest rate for home loans is 10.5%, the fixed interest rate would be 12%.

Lenders argue that even if the floating interest rate were to rise by up to 2.5 percentage points, the borrower would be able to save more money when it is below the fixed rate. It has been widely argued that their preference for the floating rate-based regime is to better adjust their positions as per the evolving market dynamics. The advantages are transmitted onto the borrower’s savings pool, but the opposite also holds true in a rising benchmark rate regime. Also noteworthy is the fact that floating interest rate loans do not draw any prepayment penalty — unlike fixed rate loans.

However, the fixed rate-based regime endows a borrower with greater certainty and security. This also helps in better planning and structuring of individual budgets. Thus, prospective borrowers should note broader evolving economic dynamics and accordingly decide the tenure they seek.

**What is RBI’s stance on assessing repayment capacity?**

RBI stated in the circular that lending entities are required to consider the repayment capacity of the prospective borrower. This is to allow borrowers adequate (or optimum) headroom/margin for elongation of tenure and/or increase in EMI. About parameters for assessment, Governor Shaktikanta Das had earlier stated that banks would have to consider the payment capacity of the borrower and how long payment capacity would last (the age factor). He cautioned that it would be necessary to “avoid unduly long elongation which sometime may going forward camouflage the underlying stress in a particular loan.” The extension, he stated, must be for a “reasonable period”.

“It is a commercial decision that the banks have to take. We are just providing some broad guidelines,” he informed.

**UPI QR CODE-CENTRAL BANK DIGITAL CURRENCY INTEROPERABILITY: HOW DOES IT WORK AND HOW DO CUSTOMERS BENEFIT?**

UPI QR Code-CBDC interoperability: A few banks, including State Bank of India, Bank of Baroda, Kotak Mahindra Bank, Yes Bank, Axis Bank, HDFC Bank and IDFC First Bank, have introduced UPI interoperability on their digital rupee application.

With banks enabling the interoperability of Unified Payments Interface’s (UPI) Quick Response (QR) code with their central bank digital currency (CBDC) or e₹ application, users of retail digital rupee will be able to make transactions by scanning any UPI QR at a merchant outlet. Merchants can also accept digital rupee payments through their existing UPI QR codes.





This integration of UPI and CBDC is part of the Reserve Bank of India's (RBI) ongoing pilot project on pushing the retail digital rupee (e₹-R).

**So, what is interoperability?**

Interoperability is the technical compatibility that enables a payment system to be used in conjunction with other payment systems, according to the RBI. Interoperability allows system providers and participants in different systems to undertake, clear and settle payment transactions across systems without participating in multiple systems. Interoperability between payment systems contributes to achieving adoption, co-existence, innovation, and efficiency for end users.

**And what is UPI QR code-CBDC interoperability?**

Interoperability of UPI with the digital rupee means all UPI QR codes are compatible with CBDC apps. Initially, when the pilot for the retail digital rupee was launched, the e₹-R users had to scan a specific QR code to undertake transactions. However, with the interoperability of the two, payments can be made using a single QR code. The digital rupee issued by the RBI, or the CBDC, is a tokenised digital version of the rupee. The e₹ is held in a digital wallet, which is linked to a customer's existing savings bank account. UPI is directly linked to a customer's account.

**How will it benefit customers and merchants?**

The interoperability of UPI and CBDC will ensure seamless transactions between a customer and merchant without having the need to switch between multiple digital platforms.

It will allow a digital rupee user to make payments for their daily needs, such as groceries and medicines, by scanning any UPI QR codes at any merchant outlet. Even merchants are not required to keep a separate QR code to accept the digital rupee payments. They can accept CBDC payments on their existing QR code.

"We will take advantage of the UPI network to increase transactions in CBDC. There will be one QR code, and you can scan the QR code using the CBDC app. If the merchant has a CBDC account, the payment will be settled in the CBDC wallet. If a merchant does not have a CBDC account, then there will be an option to make payment using UPI," RBI's Deputy Governor T Rabi Sankar said in July this year.

**What is a QR code?**

A Quick Response (QR) code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera. It contains information about the item to which it is attached, according to the National Payments Corporation of India (NPCI). QR code is an alternate contactless channel of payments. It allows merchants or businesses to accept payments from their customers directly into their bank accounts.

**And how will interoperability help in increasing CBDC adoption?**

Currently, UPI is a widely used payment method, and the interoperability between it and the CBDC will propel the adoption of the digital rupee. At present, more than 70 mobile apps and over 50 million merchants accept UPI payments. In July, RBI Deputy Governor Sankar said there were 1.3 million customers and 0.3 million merchants using the retail digital rupee. The daily per-day e₹-R transactions in July were around 5,000-10,000.



SBI said the seamless integration of CBDC with UPI will enhance the acceptance and utilization of digital currencies in everyday transactions. “This integration will be a game changer for the digital currency ecosystem,” it said.

#### **How many banks have enabled UPI and CBDC interoperability?**

A few banks, including State Bank of India, Bank of Baroda, Kotak Mahindra Bank, Yes Bank, Axis Bank, HDFC Bank and IDFC First Bank, have introduced UPI interoperability on their digital rupee application.

### **PULSES ARE DEARER**

Pulses have emerged as the main worry from below-normal monsoon rainfall this time. Not only have farmers sown over 1.1 million hectares or 8.6 per cent less area under arhar, urad, moong and other kharif season pulses compared to last year, the prospects of a not-too-great crop has driven up prices. In the last two months alone, prices of arhar in major wholesale markets have risen from Rs 10,000 to Rs 12,500 per quintal, while climbing from Rs 6,500 to Rs 9,000 for moong and from Rs 4,600-4,700 to Rs 6,100-6,200 for chana.

All three are now quoting way above their official minimum support price (MSP) levels of Rs 7,000, Rs 8,558 and Rs 5,335 per quintal respectively. The chana price increase is significant because government agencies were holding some 3.8 million tonnes (mt) of this crop at the end of its procurement season on June 30. Clearly, the price pressures in other pulses have rubbed off on it as well.

The situation isn't being helped by international prices. India is not only the world's biggest producer, but also consumer and importer of pulses. Landed prices of masoor, the largest imported pulse, have soared since late-July, from \$650-680 to \$780-790 per tonne, with both Canada and Australia set to harvest smaller crops of 1.3-1.4 mt each as against last year's 1.7-1.8 mt. They have also crossed the MSP of Rs 6,000/quintal for masoor. In the case of arhar, Mozambique has imposed a floor price of \$850-900 per tonne on exports, while El Niño is casting its shadow on Myanmar, which is also a supplier of urad to India. One must, therefore, anticipate shortfalls both on the domestic production and imports front.

The government should use the chana stocks that it has judiciously for open market operations. It can even consider limiting the bidders to actual users/dal millers, instead of traders, while allocating quotas prorated to the price offers. In the case of imports, the current restriction of not allowing stocks to be held beyond 30 days from the date of customs clearance is counterproductive. It actually discourages imports, which are necessary at this point. The stock limits are also resulting in imports happening in 25-tonne containers, rather than bigger 30,000-60,000 tonne vessels. Lastly, the government must enable imports of yellow/white peas that, at present, attract a 50 per cent duty plus a minimum price of Rs 200/kg below which they cannot come in. In today's situation, that is not warranted at all.

### **THALI ECONOMICS: HOW FOOD INFLATION IS PINCHING VEGETARIAN HOUSEHOLDS MORE, WHY SEPTEMBER PROMISES SOME RESPITE**

The spike in the prices of vegetables, especially tomatoes and other food items, has taken a toll on Indian households' budgets. The cost of making the daily meal, or the simple thali, is now pinching the households, with spillovers from tomato price spikes to prices of other commodities and



unhinging inflation expectations remaining a major concern for them. Households have seen a 24.26 per cent rise in making a vegetarian thali meal and a 12.54 per cent increase in the case of non-vegetarian thali.

#### **How has the price rise in food items affected households?**

The cost of a vegetarian thali rose 24.26 per cent to Rs 33.8, while that of a non-vegetarian thali increased by 12.54 per cent to Rs 67.3 in August 2023, when compared to the same period of last year, says a report from rating firm Crisil.

This means a family of five would be incurring an additional cost of Rs 33 for preparing vegetarian thali and Rs 37.5 for non-vegetarian thali for lunch or dinner a day. If they prepare thali for both lunch and dinner, the additional cost per month will be Rs 1,980 for vegetarian thali and Rs 2,250 for non-veg thali per household of five members.

Male agricultural workers in rural areas got an average daily wage of Rs 323.2 in India in 2022, according to RBI data. If they work for 20 days in a month, their monthly income will be around Rs 6,500 per person. If there are two earning members in a household, 78 per cent of the wages will go towards preparing the vegetarian thali (both lunch and dinner) for the month.

Expenses towards education, health, clothes, travel and energy will have to come from the balance of 22 per cent. Households will have to compromise on the quality and richness of their daily meals and cut down food expenses to keep the family budget under control.

#### **What's a thali meal and how are its costs calculated?**

Thali is an Indian-style meal made up of a selection of various dishes – vegetarian and non-vegetarian – which are served on a platter. A veg thali comprises roti, vegetables (onion, tomato, and potato), rice, dal, curd, and salad. For non-veg thali, the constituents remain the same but for dal, which is replaced by chicken.

Crisil said the average cost of preparing a thali at home is calculated based on input prices prevailing in north, south, east and west India. The monthly change reflects the impact on the common man's expenditure. The data also reveals the ingredients (cereals, pulses, broilers, vegetables, spices, edible oil, cooking gas) driving changes in the cost of a thali.

#### **What led to the rise in thali prices?**

Of the 24.26 per cent rise in the vegetarian thali cost, 21 per cent can be attributed solely to the price of tomato, which rose 176 per cent from last year to Rs 102/kg in the month as against Rs 37/kg a year ago. The prices of onion rose 8 per cent, chilli 20 per cent and cumin 158 per cent from August 2022, accounting for a one per cent increase in the cost of vegetarian thali, Crisil said.

For non-vegetarian thali, the cost increase was slower as the price of broilers, which form more than 50 per cent of the cost, is estimated to have risen a moderate 1-3 per cent during the year. A 17 per cent year-on-year decline in the price of vegetable oil and 14 per cent in potato cushioned the cost of both the thalis to some extent, Crisil said.

#### **Will thali prices come down?**

According to Crisil, the costs could see some pullback in September as tomato retail price has halved to Rs 51/ kg from July 2023. Also, the cost of a 14.2 kg LPG cylinder, which was Rs 1,103 in



August has been brought down to Rs 903 per cylinder from September. This will also come as a relief for consumers, Crisil said.

The impact of RBI's hike in the Repo rate by 250 basis points to 6.50 per cent is still playing out. However, food inflation is unlikely to come down steeply in the near future. India's retail inflation is expected to be around 7 per cent in August from a 15-month high of 7.44 per cent in July, primarily due to softening tomato prices. This is much higher than the RBI's comfort level of four per cent.

#### **How has RBI reacted to food inflation?**

Potato prices increase after every two years and onion prices rise after every 2.5 years. Tomato prices increase almost every June-July. A vegetable price shock is thus not new to India. "We analyzed about 12 episodes of vegetable price fluctuation since FY2010. These price spikes fizzle out within a few months, though duration of each cycle differs ranging from 61 days in 2010-11 to 142 days in 2016-17 (both in tomatoes)," said Aastha Gudwani, India Economist, Bank of America Securities (BofAS).

When the RBI's policy response in each of these episodes was analysed, it was observed that the RBI has mostly refrained from acting on such events, given its seasonal nature. As many as 6 out of 12 times, the RBI has kept the policy rate unchanged even in the face of record-high food inflation. "Twice they reduced the repo rate by 25 bps (including the 2019 onion price peak) and only four out of 11 times the RBI increased the repo rate," the report said.

#### **What exactly was the impact of tomato and onion?**

Although its (tomato) weight in CPI inflation is only 0.6, this increase is likely to add 120 bps to headline. Tomato, onion and potato together account for only 2.2% of headline CPI inflation but contribute nearly 50% to the variance in headline inflation. The usual drivers of such spikes are – deficient or excess rainfall, heatwaves or strikes in mandi, speculation and hoarding. Since the demand for them is relatively inelastic, inflation becomes a serious problem.

According to the RBI 'State of the Economy' report, the recent spike in tomato prices on account of crop damage due to inclement weather and pest attacks in the major production belts has received widespread attention as it has taken a toll on households' budgets. "Historically, tomato prices have been an important contributor to volatility in overall inflation. Its volatility also gets transmitted to prices of other vegetables in both retail and wholesale markets," the RBI said.

"Tomato, being a highly perishable item with a very short crop duration, exhibits considerable seasonal variation in prices but these episodes are short lived," the RBI said. "The average duration of a high price episode, derived from the Markov Chain transition probability matrix, shows that prices stay above Rs 40 for an average duration of 2.6 fortnights whereas prices remain below Rs 20 for an average duration of 10 fortnights," the RBI said.

### **WHAT IS ONE-HOUR TRADE SETTLEMENT, WHICH SEBI IS PLANNING TO LAUNCH BY MARCH NEXT YEAR**

Securities and Exchange Board of India (SEBI), which had in July announced it was working to launch real-time settlement of trades, is now planning to implement one-hour settlement of trades first.



The regulator is aiming to launch one-hour settlement of trades by March next year, its Chairperson Madhabi Puri Buch said on Tuesday. She also said the Application Supported by Blocked Amount (ASBA)-like facility for trading in the secondary market will likely be launched in January 2024.

#### **What is trade settlement?**

Settlement is a two-way process which involves the transfer of funds and securities on the settlement date. A trade settlement is said to be complete once purchased securities of a listed company are delivered to the buyer and the seller gets the money.

The current cycle of T+1 means trade-related settlements happen within a day, or 24 hours of the actual transactions. The migration to the T+1 cycle came into effect in January this year. India became the second country in the world to start the T+1 settlement cycle in top-listed securities after China, bringing in operational efficiency, faster fund remittances, share delivery, and ease for stock market participants.

#### **What has SEBI said?**

“On the way to instantaneous settlement, we believe that the one-hour trade settlement is much quicker to implement than instantaneous. So, if the instantaneous is going to take another 6-7 months, we will implement one-hour trade settlement before that,” Buch told reporters on the sidelines of the Global Fintech Fest.

The technology for implementation of one-hour trade settlement exists but for instantaneous trade settlement, the system needs some additional technology development, which may take more time. She expects the instantaneous trade settlement to be launched by the end of 2024.

#### **What are the benefits of one-hour trade settlement?**

Under the current T+1 settlement cycle, if an investor sells securities, the money gets credited into the person’s account the next day. In one-hour settlement, if an investor sells a share, the money will be credited to their account in an hour, and the buyer will get the shares in their demat account within an hour.

### **WHY THE GOVT IS RUSHING AN ALTERNATIVE TO ITS LAPTOP LICENSING SCHEME**

The Centre’s move to impose a licensing requirement for the import of laptops and personal computers in early August invoked feelings of a pre-1991 era decision, with many in the industry internally referring to it as a return of the infamous Licence Raj.

The issue has also come up in meetings between US and Indian officials after American companies including Apple, Dell, and HP urged the US government to ask New Delhi to reconsider its policy. Last month, it was a key point of discussion during the trade ministerial meeting between the two countries.

With New Delhi set to host the final leg of the G20 Summit in a few days, which will be graced by some of the world’s most powerful leaders — including US President Joe Biden, who is expected to take up the issue of import restrictions with Prime Minister Narendra Modi — the strategy definitely called for some rebranding.



Enter “import management system”. On Sunday (September 3), The Indian Express reported that the Centre is conducting consultations on a new system through which it aims to monitor the sources from which IT hardware is being imported. On the table is a new proposal: introducing a condition that finished IT hardware such as laptops, personal computers and servers can only be imported from “trusted geographies”.

Amid a deepening rift between New Delhi and Beijing, this is a move aimed at curbing imports specifically from China.

#### **From import restriction to import management**

On August 3, the Directorate General of Foreign Trade (DGFT) issued a notification stating that companies must obtain a licence before importing laptops and other devices – to be implemented with immediate effect. Following the adverse reactions, it issued another notification a day later which gave the industry a three-month reprieve. So, import of such devices will be “restricted” from November 1.

The licensing requirement is now expected to be removed, and replaced with an import management system. While mindful of the criticism of the previously proposed policy, New Delhi also does not want to compromise on its aim of building India as an electronics manufacturing hub and crucially, wants companies to establish new supply chains that are not as dependent on China.

By introducing a requirement to allow imports of finished IT hardware only from “trusted” regions, it aims to achieve just that. After all, it is a strategy that the government has already used in the telecom sector.

#### **Strategy already used in the telecom sector**

In June 2021, the Central government launched the ‘trusted telecom portal’ and signalled the implementation of the National Security Directive on Telecommunication Sector (NSDTS).

Under the directive, telecom companies are mandatorily required to connect in their networks only those new devices which are designated as “trusted products” from “trusted sources”. Post the 5G spectrum auction last year, operators like Reliance Jio and Bharti Airtel have signed agreements with companies like Ericsson and Samsung, excluding Chinese majors Huawei and ZTE.

#### **Why New Delhi is wary of Beijing**

Since the Galwan clashes in 2020, India has taken a number of policy measures to cut Chinese productions – both goods and services – from its market. And laptops and personal computers is an area where New Delhi’s import dependence on Beijing is quite high.

India has seen an increase in imports of electronic goods and laptops/computers in the last few years. During April-June this year, the import of electronic goods increased to \$6.96 billion, from \$4.73 billion in the same period a year ago. This accounts for share of 4-7 per cent in India’s overall imports.

The highest share of imports is in the category of personal computers including laptops, and palmtops, under which imports from China stood at \$558.36 million in April-May this year as



against \$618.26 million in the year-ago period. Notably, China accounts for roughly 70-80 per cent of the share of India's imports of personal computers, laptops.

## TOYOTA'S FLEX-FUEL PROTOTYPE: HOW IT WILL WORK, WHAT ADVANTAGES IT OFFERS

Toyota last week unveiled a prototype of the Innova Hycross with a flex-fuel hybrid powertrain, its first car in India with this option, and one that the Japanese carmaker claims is the world's first BS6 Stage II-compliant flex-fuel vehicle. Toyota had displayed an imported Corolla flex-fuel hybrid sedan as a pilot project late last year. The pilot was initiated as part of a government-led push to commercially deploy this technology, which is already in use in markets such as Brazil, Canada, and the United States.

### Hycross prototype

The Hycross flex-fuel prototype has a 2-litre Atkinson Cycle petrol engine coupled with an electric motor, the same as in the hybrid version of the standard Hycross. Toyota claims the prototype can run on petrol with more than 20% ethanol blending that is currently mandated in India, and that its performance would be at par with the standard Hycross hybrid, even with ethanol-blended petrol.

Also, the company says, it will achieve low carbon emissions "on a comprehensive well-to-wheel basis". Like the standard strong hybrid variant, the Hycross flex-fuel prototype would run 60% of the time in the electric vehicle mode using energy stored in the battery pack.

For now, multiple units of the flex-fuel prototype will be tested in India. The next steps include further finer calibration, homologation (process of certifying that a vehicle is roadworthy), and certification.

### Flex-fuel technology

A flex-fuel vehicle typically has an internal combustion engine (ICE), but unlike a regular petrol vehicle, it can run on more than one type of fuel, or a mixture of these fuels. The most common versions use a blend of petrol and ethanol or methanol. Flex-fuel vehicles such as the prototype Hycross can run on blends of ethanol that are far higher than the current standard 20% mix (E20).

This is made possible by equipping the engine with a fuel mix sensor and an engine control module (ECM) programming that senses and automatically adjusts for any ratio of designated fuels. Union Minister for Road Transport and Highways Nitin Gadkari had told The Indian Express earlier that the flex engines push is part of the broader strategy to cut dependence on imported crude in the medium-to-long run.

### How these cars work

Most components in a flex fuel vehicle are the same as those in petrol-only cars. But some special ethanol-compatible components are required to adjust to the different chemical properties and energy content in ethanol/ methanol, such as modifications to the fuel pump and fuel injection system.

The ECM is also calibrated to accommodate the higher oxygen content of ethanol. The hybrid engine of the type used in the Toyota Hycross would have separate spark plugs, piston ring tops, and valves to render them more corrosion-resistant, and a modified catalyst in the exhaust system to lower hydrocarbon emissions.



The vehicle's fuel filter and fuel lines have also been tweaked. According to IHS Markit, as of 2018, there were more than 21 million flex-fuel vehicles in the US, but Brazil was the biggest market and leader in this segment.

#### **Flex pros and cons**

The use of ethanol blending sharply lowers harmful pollutants such as carbon monoxide, sulphur, and carbon and nitrogen oxides. Blending will also help cut oil imports to fuel vehicles. However, flex-fuel cars typically take a 4-8% hit on fuel efficiency when using ethanol for motive power.

So, while fuel economy is generally lower with increased levels of ethanol (engines are optimised for petrol), many flex fuel vehicles have improved acceleration performance when operating on higher ethanol blends. Another problem with ethanol blending is that source crops such as sugarcane are usually very water-intensive.

According to a NITI Aayog report, in 2019-20, more than 90% of the ethanol produced in the country came from sugarcane, which is also a politically important crop in states such as Maharashtra and Uttar Pradesh.

The National Biofuel Policy 2018 envisages a 2025 target of 20% blending. Countries such as Brazil can be flexible on the degree of the mix depending on crude prices, varying it when energy prices rise like they did after the Ukraine war — the precondition being that the vehicular fleet has been equipped to adjust to this varying fuel mix.

In Brazil, nearly all cars are required to be able to handle fuel blends with a minimum of 22% ethanol, and the state-owned oil company Petrobras is mandated to buy ethanol and dispense the mix at retail pumps. As a result, almost no light vehicle in Brazil runs on pure petrol. There is also a government subsidy to narrow the price gap of higher ethanol blends, in order to make the proposition viable. This is a factor that would have to be considered as India steps up its fuel blending plan.

#### **Blending advantages**

The ethanol mix in petrol in India went up from 1.53% in 2013-14 to 11.5% in March 2023. This has helped cut the oil import bill by an estimated Rs 41,500 crore in the last eight years. In 2020-21, ethanol blending enabled a reduction of 26 million barrels of petrol, resulting in savings of Rs 10,000 crore, according to official estimates. The expected implementation of E20 by April 2025 is estimated to result in annual savings of Rs 35,000 crore in India's oil import bill. To overcome the challenges of lower fuel efficiency of flex-fuel vehicles, electrified flex-fuel vehicles are being introduced, which offer the advantages of both a flex-fuel engine and an electric powertrain, as in the case with the Hycross prototype.





## LIFE & SCIENCE

### A RADICAL IDEA TO SETTLE THE UNIVERSE EXPANSION DISPUTE

About 13.8 billion years ago, a really small, really dense and really hot spot lying beyond spacetime began to expand. Its expansion and cooling – in an event that scientists have called the Big Bang – produced the universe as we know it.

The universe continued to expand, at first really rapidly before slowing down to a great degree. Then, about five or six billion years ago, dark energy – an unknown and largely uncharacterised form of energy – accelerated its expansion again.

Scientists confirmed that the universe was indeed expanding at an accelerating rate in 1998.

#### A crisis

In 1929, American astronomer Edwin Hubble provided the first mathematical description of the universe's expansion in an equation called Hubble's law. Yet the precise rate of this expansion, called the Hubble constant, remains a point of crisis in modern cosmology.

In a move that could eventually help resolve this crisis, researchers at the International Centre for Theoretical Sciences (ICTS), Bengaluru; the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune; and the University of California, Santa Barbara (UCSB) have proposed a new way to determine the Hubble constant.

Their study was published in the journal *Physical Review Letters* in June.

While the study's predictions may only be tested in the 2040s, their method "will provide an independent measurement of cosmological parameters," Jasjeet Singh Bagla, an astrophysicist at the Indian Institute of Science Education and Research (IISER), Mohali, said.

### FINALLY, PHYSICISTS HAVE A WAY TO 'SEE' INSIDE SHORT-LIVED NUCLEI

Around 150 years ago, three scientists named Ernest Rutherford, Hans Geiger, and Ernest Marsden exposed a thin gold foil to radiation. Based on how the rays were deflected by atoms in the foil, they figured out that every atom has a dense centre where its mass and positive charge are concentrated.

Seventy years ago, Robert Hofstadter led a team that bombarded electrons at thin foils. The higher energy of the electrons allowed them to 'probe' the nucleus. Based on these interactions, the team understood how charges and magnetic fields were arranged inside a nucleus.

In each case, physicists were able to 'see' inside stable atoms, and then inside their nuclei, by using other particles.

Now, researchers in the RIKEN Nishina Center for Accelerator-Based Science, in Japan, have taken a big leap forward in this tradition – by demonstrating a set-up that can use electron scattering to 'see' inside unstable nuclei, including those that don't occur naturally.

The previous experiments used thin foils that were easy to hold. The new one is more sophisticated, using an apparatus to hold the nuclei of caesium-137 atoms as well as make sure electrons could interact with them, using a system called SCRIT. The wait for this advancement is

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



why a similar study couldn't be conducted before. The results were published in the journal Physical Review Letters on August 30.

First, the researchers accelerated electrons in a particle accelerator to energise them, and then smashed them into a block of uranium carbide. This produced a stream of caesium-137 ions (atoms stripped of electrons). This isotope of caesium has a half-life of around 30 years.

The ions were then transported to the SCRIT system, which is short for 'Self-Confining Radioactive-isotope Ion Target'.

## CARTESIAN COORDINATES: A MEANS TO FIND YOUR WAY

### WHAT IS IT?

A coordinate system is a set of numbers that allows you to specify the location of a point in some space. The Cartesian coordinates is one such system, which uses a set of three numbers to specify the distance of a point from three perpendicular planes. In general, this system uses N numbers if there are N perpendicular planes, including in higher dimensions.

Say you are looking for a city on Google Maps. You search for it and the app shows what it has found. The way the city is located on the map is with a latitude and a longitude. Similarly, on a plane, Cartesian coordinates use a pair of numbers – one on the x-axis, one on the y-axis – that can be used to locate a specific point on the plane. In three dimensions, the point's location can be fixed by adding one more number, e.g. the floor of the building you are on.

The French philosopher and mathematician René Descartes created this system in the 17th century. His invention bridged the gap between algebra and geometry and created analytic geometry. The coordinates also have an array of applications in astronomy, engineering, and most other disciplines that involve geometry, including representing spatial data in computer graphics and computer-aided geometric design.

## BIZARRE' BIRD-LIKE DINOSAUR HAS SCIENTISTS ENTHRALLED

About 148 to 150 million years ago, a strange pheasant-sized and bird-like dinosaur with elongated legs and arms built much like wings inhabited south-eastern China, with a puzzling anatomy suggesting it either was a fast runner or lived a lifestyle like a modern wading bird. Scientists said on Wednesday they have unearthed in Fujian Province the fossil of a Jurassic Period dinosaur they named *Fujianvenator prodigiosus* - a creature that sheds light on a critical evolutionary stage in the origin of birds. The question of whether *Fujianvenator*, with its curious mixture of skeletal features, should be classified as a bird depends on how one defines a bird, according to study leader Min Wang, a paleontologist at the Institute of Vertebrate Paleontology and Paleoanthropology of the Chinese Academy of Sciences. A remarkable event in dinosaur evolution came when small feathered two-legged dinosaurs from a lineage known as theropods gave rise to birds late in the Jurassic, with the oldest-known bird - *Archaeopteryx* - dating to roughly 150 million years ago in Germany. *Fujianvenator* is a member of a grouping called avialans that includes all birds and their closest non-avian dinosaur relatives, Wang said. Despite their modest beginnings, birds survived the asteroid strike 66 million years ago that doomed their non-avian dinosaur comrades.



## WHAT IS HEAT INDEX AND WHY IS IT IMPORTANT TO MEASURE?

### The story so far:

Earlier in August, Iran recorded a scorching heat index of 70 degrees Celsius (°C) in the coastal part of the country, a metric at which survival of life is unfathomable, if not impossible. The country had also declared public holidays on August 2 and 3 on account of “unprecedented heat,” Reuters reported. This is not the first time this year that Iran is dealing with extreme heat. In July, U.S.-based weather observer Colin McCarthy reported that the Persian Gulf Airport recorded a heat index of 66.7 °C.

### What is heat index?

Heat index, also known as apparent temperature, is a measure of how the temperature feels to humans. Relative humidity is an important factor that determines heat index, along with air temperature.

### How is the heat index calculated?

A complex formula to calculate heat index was published by Dr. Robert Steadman, a professor in the textiles and clothing department of Colorado State University, in 1979. Dr. Steadman published two papers titled The Assessment of Sultriness – Part I: A Temperature-Humidity Index Based on Human Physiology and Clothing Science, and Part II: Effects of Wind, Extra Radiation and Barometric Pressure on Apparent Temperature, both describing his calculations of heat index.

Dr. Steadman’s study considers a “typical adult human of either sex, with a height of 1.7 metres and a weight of 67 kg.”

Dew point, which is the temperature at which gas is transformed into a liquid state, is an important factor in the calculation of heat index. In terms of atmospheric moisture, it’s the temperature at which air cannot hold any more water vapour, and droplets of water begin to form. Dr. Steadman used 14 °C as the dew point in his calculations. Some countries have developed their own corresponding indices to measure heat index instead of using the one developed by Dr. Steadman.

### Is it important to measure the heat index?

Hot air can hold more moisture than cold air. Therefore, when temperature rises, the air’s capacity to hold moisture also increases, thus affecting the apparent temperature or heat index. Humidity is typically higher during heat waves — which is why the heat index at the time is usually higher than just the temperature because humid air can feel hotter to humans.

### How does high humidity impact the human body?

High humidity can lead to heat stress, meaning the body is unable to get rid of excess heat. Humans usually maintain a core temperature in the range of 36.1 to 37.2 °C. When the body is unable to get rid of excess heat, the heart rate increases due to a rise in core temperature, leading to heat-related exhaustion and rashes, among other symptoms. It can also be fatal if not addressed promptly.

At high temperatures, the human body can lose excess heat through perspiration and cool itself. But when humidity is high as well, it is difficult to sweat and then for that sweat to evaporate



because the air around is already saturated with moisture. This makes it difficult for the body to lose heat.

On the other hand, if the humidity is low, evaporation of sweat is easier, thus making the apparent temperature feel close to the actual air temperature. This is why a measure of heat index is more useful than just the temperature to gauge the impact of heat on humans.

#### **What measures can we take to adapt?**

A heat index value of 67°C or above can be extremely dangerous for people and animals who have direct and prolonged exposure, said Tashina Madappa Cheranda, senior associate at the Centre for Study of Science, Technology and Policy.

“With climate change, it is likely that we will continue to witness record-breaking heat index values across the world. We will need to prepare and adapt to such extreme conditions by investing in early warning, making changes to work timings, and finding sustainable cooling solutions,” she added.

### WHAT PROMPTS PLANTS TO SET TRAPS?

There is something inherently underhand about traps, yet deliciously wicked, especially when the victim is bigger and stronger than you and has been picking on you. I’m not sure for how long we’ve been setting traps, both for ourselves and for animals, but I would not be surprised if very primitive us were inspired by what we saw was going on in the natural world, where both plants and animals have been setting and springing traps for one another for aeons.

One question that has begun to bother me a bit is this: do they know what they are doing is inherently underhand, even evil maybe? We are now declaring so many animals – and even some insects – to be sentient. Does this extend to knowing the difference between right and wrong? And if, as is being claimed, plants can feel ‘happy’ when they hear classical music and appreciate soothing compliments, do some of them smile when they trap their victims?

Of course the underlying justification for their behaviour is that most of them grow in areas where the soil is poor and they cannot (or are unable to) get the nitrogen they need from the soil, so they have taken to trapping insects and even small mammals and birds to make good the shortage. Perhaps they have a stronger case than animals – which can chase their prey – because plants can’t move (at least not quickly enough), so must lure their victims to them. And some of the traps they have evolved to do so are pure evil genius.

My favourite has got to be that of the Venus flytrap, found in the subtropical wetlands on the east coast of North America. The terminal part of the leaf of this plant that forms the trap is hinged along the midrib, with the two lobes, armed with spikes leaning towards one another. Trigger hairs along the inside of the ‘trap’ are sensitive to touch. Along comes a spider or fly, brushes against the hair – and nothing happens. But only for anything between 0.5 and 30 seconds maybe, because a timer has been set off by the first trigger-hair. If the victim disturbs another hair within this period, the two diabolically armed lobes snap shut instantaneously, caging the buzzing insect.

Some kind of electric switch gets thrown, snapping shut the trap in under a second. The grace period is given to reassure the plant that what set off the first trigger was something alive and worth trapping, and not say a falling leaf. Even after the trap closes, the plant waits for more trigger hairs to be disturbed as the victim buzzes and fizzes furiously inside trying to escape. This



reassures the plant that it has truly claimed a meal worth digesting, and now it hermetically seals the lobes, turning the leaf into a stomach in which its meal is digested. After 10 days, the lobes reopen and all that remains is a husk. Each trap can only work four or five times before the leaf dies. It's also been called the bear-trap, or mouse-trap or man-trap – all inaccurate because mercifully the plant does not trap either mice, men or bears!

Whilst we're talking about traps and lures, can bribes be far behind? Pitcher plants use sweet nectar and brightly coloured patterns to lure insects inside the rolled up leaves which form the 'pitcher'. The inner walls are waxy and slippery as a skating rink, and right at the bottom of the leaf is a well filled with digestive enzymes waiting. Insects lose their footing and slide right down, and that's that.

Perhaps, even more wicked is the cobra plant (another native of North America), whose leaves rise up to resemble a striking cobra, complete with a hood and an alluring (to insects) looking forked tongue. The top of the hood is splotched with chlorophyll-free patches – which one could say, resemble skylights. The entrance to the tube, inside which the victim thinks all the goodies are, is a tiny hole, the walls slippery and lined with downward pointing hairs. In goes the ant, and then wanting to get out looks up and is confused by all the 'skylights' in the hood (which also conceals the actual entrance), checking them one by one and tiring itself out before losing its grip and falling to the bottom, assisted by the downward pointing hairs that line the walls of the tube.

The nearly 200 species of sundew are found in bogs all over the world, except Antarctica, and are wholly reliant on an insect diet for their nutrition. Their leaves are rimmed with long tentacles, tipped with shiny pearl like beads of sticky, sweet glue, something no bee or fly or any other insect can resist. They land, get stuck, struggle, only to be more tenaciously held, and eventually die either of exhaustion or asphyxiation as the tentacles close over them and wrap them up and the digestive juices get to work.

Then, there's the one and only bladderwort that creates — of all things – a vacuum into which it sucks its victims. Both terrestrial and aquatic varieties exist worldwide, and they trap their prey by means of an aquatic bladder, which is negatively charged, its entrance sealed by a trapdoor, but hair-triggered to open when prey disturb the trip lines. The negative charge inside, causes water to leach out and a vacuum to be formed. The trapdoor opens, the victim and water is sucked in and the door is closed all in 1/35th of a second!

#### EARLY PREDICTION OF PREECLAMPSIA USING A BIOMARKER

A liquid-biopsy approach that measures DNA-methylation levels in the blood may improve the detection of pregnancies at risk of developing preeclampsia at early stages, a study published in Nature Medicine shows.

Preeclampsia is a major cause of morbidities during gestation. Early-onset preeclampsia — occurring before 34 weeks of gestation — is associated with a higher risk of severe disease and foetal mortality. Among the few interventions available, low-dose aspirin at early stages of the disease (before 16 weeks of gestation) can reduce the risk of developing preeclampsia, but early identification of the disease is needed to initiate this intervention. Previous studies have shown that widespread methylation changes in the placenta occur at delivery.

Liquid biopsy is a promising emerging tool for non-invasive diagnostics, and it is increasingly being used to detect disease and monitor progression and treatment response.



## NEW COVID-19 VARIANT MAY BE 'REASON TO WORRY': WHAT IS KNOWN ABOUT 'PIROLA' SO FAR

An article published in the Yale Medicine Review on August 31 has noted the rise of Covid-19 infections in multiple countries, driven by a new Coronavirus variant called BA.2.86, which is informally being termed 'Pirola'. While the report says that it is too early to know if this strain is any more transmissible than other ones, there may be a reason to worry. The report says it has "more than 30 mutations to its spike protein compared to XBB.1.5, a variant of Omicron that had been the dominant strain in the United States... The spike protein is how the coronavirus enters human cells."

**Pirola has been witnessed in the US, the UK, and other countries, in unrelated cases.**

According to Yale Medicine infectious diseases specialist Scott Roberts, MD, the high number of mutations is a point of concern here. He said in the report that this was similar to the number of mutations that differed between Delta, one of the early strains of the coronavirus, and Omicron (that was dominant in the winter of 2021).

"With every respiratory virus, as it spreads from person to person, it evolves gradually over time. But these massive shifts, which we also saw from Delta to Omicron, are worrisome... The other concern is that this strain has been picked up in at least six countries, and the cases are unrelated. This suggests some degree of transmission in the [international] community that we're not detecting," he said.

**How do viruses mutate, exactly?**

It is natural for all viruses to mutate over time and such changes are particularly common in viruses that have RNA as their genetic material, as in the case of coronaviruses and influenza viruses. Once a virus enters the human body, its genetic material — RNA or DNA — enters the cells and starts making copies of itself which can infect the other cells. Whenever an error occurs during this copying process, it triggers a mutation. Occasionally, a mutation comes along when the genetic mistakes that are introduced while copying prove to be advantageous for the virus — these help the virus copy itself or enter human cells more easily. Whenever a virus is widely circulating in a population, the more it spreads and replicates, its chances of mutating increases.

**What differentiates Pirola?**

Speaking to the Yale School of Medicine, Anne Hahn, a postdoctoral associate who leads the Yale SARS-CoV-2 Genomic Surveillance Initiative, said that this is a "much more interesting subvariant", when compared to the Omicron subvariant known as XBB.1.9. That variant initially spread quickly but did not overwhelm populations at a significant scale.

The same report noted that it has been detected by surveillance labs in Israel and Denmark and later in labs in England, South Africa, and the United States.

## DIGENE GEL USED FOR ACIDITY AND GAS RELIEF RECALLED IN INDIA: DOCTORS ANSWER ALL QUERIES

Drug manufacturer Abbott India has withdrawn all batches of the popular antacid syrup, Digene gel, which were manufactured at its Goa facility, after customers reported that the liquid in the



bottle had turned white, tasted bitter and had a pungent smell when they bought it early August. The syrup is usually pink with a sweetish taste.

The public notice issued by the apex drug controller, Central Drugs Standard Control Organisation, on its website, said: “The impugned product may be unsafe and its use may result in adverse reaction.” It urges people to discontinue the use of Digene gel manufactured at the Goa facility. Doctors say there is no need to panic but add that anyone consuming this over-the-counter medicine for long durations should check in with their physicians. However, consuming Digene in tablet form is safe.

#### **What is Digene used for?**

The pink liquid — or its pill form — is known to relieve acidity and its symptoms such as heartburn, stomach discomfort, abdominal pain and gas. It can be prescribed for gastritis (inflammation of the stomach lining) and acid reflux (a condition where stomach acid flows back to the food pipe). It uses basic compounds like magnesium hydroxide to neutralise the stomach acid.

#### **Can the medicine be safely consumed by all?**

The antacid is generally safe and available for use over the counter. However, its long-term use should be avoided as it leads to other complications. “While people continue to take the medicine considering it to be generally safe, long-term use can lead to issues of the kidney and bones. This is the reason people should take such medicines only under the guidance of a doctor if they need it for long-term use rather than an occasional use,” says Dr Suranjit Chatterjee, senior consultant of internal medicine at Indraprastha Apollo hospital.

“Long term use of the medicine can lead to elevated calcium levels. It can cause a condition known as milk-alkali syndrome marked by this increase in calcium levels, an elevated pH of the body, and kidney damage.” Antacids cause your body to produce more acid, which worsens symptoms, impacts your nervous system, even leads to iron deficiency.

#### **What does the notice say?**

The public notice said the company initially withdrew one batch of its product available in mint flavour and four batches in orange flavour after receiving a complaint about a product that was white, had a bitter taste and pungent smell. Within a week the company recalled all batches of its Digene gel sold in mint, orange, and mixed fruit flavours manufactured at its Goa facility.

### THE IMPORTANCE OF TESTING MENSTRUAL PRODUCTS WITH HUMAN BLOOD

Blood really is thicker than water —yet makers of menstrual products have traditionally used saline to estimate how much liquid they can hold.

The capacity of traditional menstrual products to absorb is a common way to measure the amount of blood lost. Clinicians use it to diagnose heavy menstrual bleeding, which affects roughly a third of menstruating individuals worldwide (from 18.2% in China to 37.9% in Turkey) and could be a sign of more worrying ailments, such as fibroids.

But diagnosis is complicated when individuals use non-traditional products such as discs and cups and when products’ advertised abilities are imprecise.



### 'No data with blood'

Now, researchers from the Oregon Health & Science University (OHSU) have reported, in a study published in the journal BMJ Sexual & Reproductive Health on August 7, the absorbency of both traditional and non-traditional period products using not saline or other fluids but with human blood. They found the advertised capacities of many products to be misleading.

## PROVIDING SUPPORT TO WOMEN DEALING WITH THE UNBEARABLE PAIN OF VAGINISMUS

Ahead of Vaginismus Awareness Day on September 15, experts call for understanding the condition to provide interventions for women. It is estimated to affect 5-17% of individuals in a clinical setting based on studies conducted in the 1990s. Numbers vary across nations, statistics on women dealing with vaginismus in India are unclear.

The body remembers what the mind forgets. Psychosomatic conditions like vaginismus are evidence of how our thoughts and our beliefs can manifest in our physical functioning and linger like an invisible wound.

The first time I heard about vaginismus was when my friend confided in me and shared her experience of unbearable pain while trying a menstrual cup. After unsuccessful trips to a gynaecologist and a lot of research, she figured that she might have a condition called vaginismus. In a country like India, where menstruation largely still remains taboo, vaginismus is barely acknowledged in conversations about female sexual health.

### Hitting a wall

"It felt very much like there was no vaginal opening and that I was hitting a muscular wall. Impenetrable, without a doubt", says Tanvi Singh, an educator. Vaginismus causes involuntary contractions of the vaginal muscles making penetration of any kind; sexual or otherwise impossible or accompanied by excruciating pain, irrespective of the woman's desire. "It is simply a protective body response", says Taru Jindal, a Mumbai-based gynecologist who runs an online vaginismus healing program with Bengaluru-based healthcare platform Proactive for Her.

Vaginismus can be classified into two types - primary and secondary. It is said to be primary when a woman has never been able to engage in penetration of any kind; be it either tampons, menstrual cups, gynaecology exams, or intercourse. It is primarily psychologically driven. We are usually taught "sex is shameful and sex is painful", says Dr. Jindal. These contribute significantly to primary vaginismus cases. Childhood abuse, sexual trauma, religious upbringing, and sexual ignorance are other contributing factors.

It is said to be secondary when a woman who previously tolerated penetration is suddenly unable to do so. Secondary vaginismus could be due to physical or emotional factors. Repeated painful internal examinations or vaginal infections, traumatic childbirth, radiation and surgery around the vagina, and conflicts within a relationship are the causes of secondary vaginismus.

Vaginismus is estimated to affect 5-17% of individuals in a clinical setting based on studies conducted in the 1990s. The numbers vary across countries. The statistics of women dealing with vaginismus in India are unclear. "I think in a conservative culture, the numbers would be huge", says Dr. Jindal.





### Live with the pain

The general notion that sex is accompanied by pain has been ingrained in women since childhood, in traditional households and many assume that pain is normal. “I used to associate sex with physical pain. I believed that the first time any penetration happened, there’d be some degree of pain. I know now that it is not true”, says Singh.

Sex education occupies the last bench in a corner of the Indian education system which combined with societal silence takes different forms - fear, pain, guilt, shame, and suffering consume Indian women indiscriminately. With no one to guide them, many women suffer in silence. Like heirlooms and folklore, a piece of advice is passed down generationally – it is common, deal with the pain.

This normalisation of pain results in internalisation and acceptance of it. Even more distressing is the fact that most women are told the pain diminishes with time and to just bear it by gynaecologists themselves. “The first doctor [that I met] at a very reputed hospital told me I should just get drunk. It’s in my head”, said Shikha Rao, a corporate employee. Finding the right doctor is a challenge. Most women on average take around 3 years to get diagnosed with vaginismus.

### The right kind of care

According to the National Family Health Survey (NFHS) report 60% of women face problems accessing healthcare. Social determinants like lack of financial autonomy are among the factors which include inadequacies in the healthcare system. The absence of a female health provider was also of concern for 31.2% of women according to the report. Many women also only seek treatment when the pain becomes unbearable.

Many women think twice before approaching a gynaecologist. Many have recounted how they have felt shamed or been given unsolicited advice during consults. Clearly, not all gynaecologists are like that, but such experiences come in the way of accessing healthcare for fear of being judged.

As a gynaecologist with vaginismus, it took Dr. Jindal 7 years to diagnose and heal herself which led her to wonder about the situation of other women. She healed within a month and it led her to create a four-step vaginismus healing program but it was her husband, Dharav Shah, a psychiatrist, who ideated it. It was launched in mid-2020 through Proactive for Her. A program that started with 5 women per batch now has 40 women per batch.

### Addressing the ordeal

While the few doctors who deal with vaginismus have a single or multi-level approach involving therapy, serial dilators, and pelvic floor exercises, Dr. Jindal’s programme additionally involves support groups for both women and their respective partners and a pleasure coach. Online space ensures privacy and healing from the comfort of one’s home.

The programme begins by addressing one’s emotional ordeal. By pinpointing the source, a therapist guides the woman to reflect on her past and make peace with it. It is necessary for the brain to disassociate pain from penetration. “I think it has to do a lot with my upbringing combined with my anxiety,” says Ms. Rao. “There was a kind of subliminal messaging. It’s not overt, but there is a sense of righteousness.” Women also bear additional emotional baggage after their failed attempts at penetration. “During attempts at penetration, there is a lot of anxiety, shame, and a sense of being less because the body is unable to do what should have been natural”, says Ms. Singh. This feeling resonates with a lot of women irrespective of their stories.



### Support groups

The women are then introduced to the support group. Turns out the core strength of the program is the women's support group. "You work as a community and heal as a community but at an individual's pace", says Mukta Mohan, who works in an NGO. Questions of self-worth and the sense of isolation disappear when women realise they are not alone and it isn't their fault. Apart from healing emotional trauma, learning to relax the mind and listening to the body is crucial. The programme involves the mind and body and pelvic floor relaxation exercises to help relieve tension around the pelvic area. Once women have control over their pelvic floor muscles, vaginal dilators are introduced. There are dilators of different sizes, one starts with the smallest one and proceeds to the largest.

With an increase in the number of participants, Dr. Jindal realised many of them came with different goals – to either get pregnant, save their marriage, or feel accepted. There were hardly any women who came with the intention to 'heal' themselves. It was then that a pleasure coach was introduced who focused on teaching women that sex is pleasurable.

The programme also provides partner support groups facilitated by Dr. Shah. It helps them talk about their own frustration, understand what women with vaginismus go through, and realise that other couples are experiencing similar situations, removing the self-blame aspect. Support groups offer a sense of community and belonging in such cases.

### Holistic approach successful

The integrated approach of the intervention has proved to be a success.

## WHICH COOKING OIL LOWERS BAD CHOLESTEROL AND BLOOD SUGAR? KNOW WHICH IS BEST FOR YOUR DIET

One of the frequent questions my patients ask me is which is the best cooking medium or oil for people with diabetes. Before I answer that, let me state a simple fact. One gram of fat/oil yields nine calories, which means that one spoon (or five gms) of oil can yield 45 calories. In other words, the most important factor is not the oil so much but the amount you use as a cooking medium. Whichever oil you use, use it sparingly because excess quantities are certainly not good for your health. An indiscriminate use may lead to obesity and insulin resistance. Our bodies need limited fat for the functioning of our nervous system and transporting fat-soluble nutrients, particularly vitamins, to all parts of the body.

Having said that, not all oils are equal and there is no one-size fits all as far as taste and preferences are concerned. Besides, there are huge regional differences with respect to the kind of oil used. The best oil for those with diabetes has got to be the one with monounsaturated fatty acids or MUFA. Groundnut, mustard and gingelly oil feature in this category. MUFA-based oils increase the good cholesterol or high-density lipoprotein (HDL) and lower the bad cholesterol or low-density lipoprotein (LDL) cholesterol. Next in the pecking order are polyunsaturated fatty acid (PUFA)-based oils. Here we have sunflower, safflower and so on. PUFA oils do not increase the LDL but some of them can lower the HDL. Our epidemiological studies show that MUFA oils are the best as far as health is concerned, followed by PUFA ones.

### BEST OILS FOR DIABETES



For diabetes, olive oil works well with its MUFA content. Rice bran oil is rich in MUFA, and a component called oryzanol, both of which reduce overall cholesterol. It has anti-inflammatory properties and hence is good for people with diabetes. Groundnuts are rich in polyunsaturated (PUFA) and monounsaturated (MUFA) fatty acids, can lower bad cholesterol and contain vitamin E which acts as an antioxidant against free radicals. Sesame oil is another option for diabetes management as it is good for the pancreas.

The oils which tend to solidify at room temperature contain high amounts of saturated fat like coconut oil, palm oil and ghee. These tend to increase LDL and should be used sparingly. Some oils have trans fats like vanaspati. Then there are hydrogenated oils that manufacturers use to keep foods fresh longer. These are the worst as far as health is considered and make you prone to obesity and metabolic syndrome. Refined oils are best avoided as they are stripped of all vitamins and natural fibre and promote formation of trans fats. Cold-pressed oils are a better choice, so avoid oils that have used heat treatment during oil extraction.

#### **SHOULD WE MIX OILS?**

Most of us mix oils depending on our cooking technique. For example, the oil used for deep frying is different from the oil we dribble on top of certain foods like salads. A combination of MUFA and PUFA oils is the best. A major part of your cooking should be done with unsaturated oils like groundnut oil, corn oil, sunflower oil and olive oil. Some part of it can be done in mustard oil while ghee, a saturated fat, can be used as tempering or for dribbling on top because it does contain some good fats that are needed for the body.

#### **HOW TO CHANGE OILS INTERMITTENTLY**

Even when you are choosing unsaturated oils, keep on rotating their variety. So, if you are having sunflower oil as a cooking medium for a while, disrupt that pattern and switch over to corn oil for a while. Then break that pattern and interchange with olive oil for instance. The idea is not to let your body get accustomed to any one type and ensure the best-balanced intake of all the mono and polyunsaturated fatty acids present in each variety.

#### **WHY COOKING AT HIGH HEAT DESTROYS ALL KINDS OF OILS**

No oil can be healthy as a cooking medium because overheating or smoking it, as we tend to do for our dishes, takes away any virtue it might have had. That's why olive oil, which has a very low smoke point, doesn't work in Indian cooking unless it is just dribbled over a baked or steamed dish and salads. Deep frying changes the character of fatty acids and releases carcinogenic compounds. And with chemical changes, the advantage of the oil goes. When oils are reused and reheated for frying, they break down and can result in the food absorbing even more oil than intended. Over time, this becomes risky for heart health. Many studies have been done on the impact of oily and fatty food on the heart. Too much oil increases an enzyme that could affect the elasticity of blood vessels.

In the end, no matter how diabetes-friendly your oil is, moderation counts. And oil alone doesn't determine your health. A good, balanced nutrition is the sum total of all that you eat. So if a major component of your diet comprises green leafy vegetables, salads and fruits, then the role of oil itself in your health diminishes to a great extent.

**ON HER WEDDING DAY, SHE OPTED FOR A GLUTATHIONE GLOW THE RIGHT WAY: A BRIDE'S JOURNEY BEYOND SKIN-LIGHTENING**

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



Like the anxious bride in the OTT series *Made in Heaven*, 25-year-old Jaya was swept up by advisories from friends and Instagram influencers on getting a glutathione treatment done before her wedding in December. “But unlike skin lightening that many brides opt for, I wanted something to improve my skin and get rid of freckles and dark circles under my eyes. Many people overlook the science of glutathione and its effect on skin health and hygiene and simply look at it as a cosmetic wonder. It’s not a magic pill for a before and after transformation but it does improve your skin.

Jaya’s decision to consult a dermatologist was the first right step as young girls in an appearance-conscious world are willing to rush to beauty clinics, which are nothing but glorified salons doing procedures without trained personnel. Dr Deepak Jakhar, co-founder and consultant dermatologist, Dermosphere Clinic, in Dwarka, began with counselling sessions to make sure that Jaya had sought the treatment for the right reason. Then he apprised her of side effects and suggested a graded approach to prevent them. “I opted for the procedure only when I was convinced about its safety. Initially, the doctor had given me a chewable glutathione tablet but as I was intolerant to its taste, he prescribed an injectable course in small doses. After three sessions, there have been no side effects so far and my freckles have almost cleared out. I will stop the day my skin clears out,” says Jaya.

Dr Deepak says that glutathione has been overhyped way more than its results. “It is a powerful antioxidant and is made up of three amino acids, namely cysteine, glycine and glutamate. It helps in cellular and muscle repair. Now because it is an antioxidant, it manages to suppress the levels of melanin that decide skin pigmentation. Hence its popularity in skin creams, serums and lotions, all meant for safe topical application. Taking glutathione by IV injection seems to prevent nerve damage and other toxicities from cancer drugs. However, there is no scientific data to say whether injections help in permanent skin lightening. In fact, no dermatologist would advise injections except on a case-specific basis. And though a minimally invasive procedure, we need to know about basic health parameters and allergies,” he explains. As a natural detoxifier, glutathione improves the health of the body’s cells and reverses ageing. It protects the skin against oxidative damage and can, therefore, fight acne, wrinkles, crow’s feet, age spots and dark under eyes.

But unaware patients come to him with unrealistic expectations. “They give examples of actor Kajol’s skin tone in the 90s and now. Many show pictures of influencers. Also many do not know that the human body produces its own glutathione. Unlike most antioxidants, which come from plant sources, the human body naturally produces glutathione in the liver. However, a poor diet, pollution, toxins, medications, stress, trauma, ageing, infections and radiation may reduce its levels. But you can restore what you have lost through dietary interventions like having sulphur-rich foods, proteins, dairy and by taking up physical exercise. Yet people want to fast-track results and spend Rs 4,000 per session. And this is a multiple-stage treatment. The oral ones aren’t cheap either,” says Dr Deepak.

The recommended daily dose of glutathione for adults ranges from 500-2,000 mg per day when taken orally, or 10-20 mg/kg body weight when administered intravenously. To maximise its effects, it is best to split up doses rather than take a single large dose each day. Glutathione is not approved by the US FDA for administration as a regular injection. Still, it is the most “popular” and controversial route of administering glutathione for skin lightening.