

# CURRENT AFFAIRS for UPSC

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## INTERNATIONAL

### WHAT IS AUSTRALIA'S INDIGENOUS VOICE REFERENDUM?

Australians will vote in a referendum on October 14 to decide whether the country's indigenous peoples should be formally consulted in making laws. The referendum question reads: "A Proposed Law: to alter the Constitution to recognise the First Peoples of Australia by establishing an Aboriginal and Torres Strait Islander Voice. Do you approve this proposed alteration?"

A recent YouGov poll has found that the referendum is unlikely to pass. What is the referendum about, and what have its opponents argued?

#### **To begin with, who are the 'First Peoples of Australia'?**

The expression, as well as the word 'aboriginal', refers to the indigenous inhabitants of the continent — people who lived on the Australian mainland and surrounding islands for tens of thousands of years before the first Europeans arrived in the early 17th century.

The Torres Strait Islands, mentioned in the referendum question, is an archipelago of small islands in the Torres Strait, a narrow body of water between the northern tip of the state of Queensland and the large island of Papua New Guinea.

#### **So what does the referendum seek to do, and why?**

The referendum asks whether indigenous Australians should be recognised in the country's Constitution, and whether a body called the indigenous "Voice to Parliament" should be set up to advise lawmakers on matters that impact their lives. The Aboriginals find no mention in Australia's 122-year-old Constitution.

Aboriginal people make up about 3.2% of Australia's population and track below national averages on most socio-economic measures. According to a government booklet containing information that would help people make the choice on whether to support or reject the vote, indigenous Australians have:

- A life expectancy 8 years shorter than non-Indigenous Australians;
- Worse rates of disease and infant mortality;
- A suicide rate twice as high as non-Indigenous Australians.

#### **How far back before the arrival of the Europeans can we trace Australia's history?**

Ancient rock carvings suggest humans inhabited Australia some 45,000 years ago.

According to the National Library of Australia, the first documented landing of a European was by the Dutch explorer Willem Janszoon, who arrived on the western side of Cape York peninsula in 1606. The Europeans were aware at the time of a land mass in the southern hemisphere that they called Terra Australia Incognita, meaning Unknown South Land, but there is no confirmed evidence of claimed landings earlier.

Captain James Cook's famous voyages took place in the second half of the 18th century, and the early British settlers on the continent were criminals and convicts who were sent there to serve



their prison sentences. Between 1788 and 1868, more than 162,000 convicts in crimes committed in Britain and Ireland were transported to Australia, according to the National Museum of Australia.

**And how did the Australian government’s policies impact indigenous people?**

Laws and policies made by the colonial settlers over time contributed to the marginalisation of the indigenous communities, who fared increasingly worse than their non-native counterparts on indicators like education and life expectancy.

Under the Infants Welfare Act of 1935, indigenous children on Cape Barren Island were removed from their families based on claims of child neglect. They were then placed in the care of non-native families and institutions and were kept separate from their culture, often facing abuse as well.

These laws were applied to thousands of children for many decades, and those children are now referred to as “The Stolen Generation”. The government’s website states, “Affecting anywhere from 1 in 10 to 1 in 3 children, there is not a single Aboriginal and/or Torres Strait Islander community who has not been forever changed.”

In recent years, legislation to improve the status of indigenous Australians has been introduced. Voting rights were granted in 1962, and in 1992 Australia’s apex court decided that native title exists over particular kinds of lands — unalienated Crown Lands, national parks and reserves — and that Australia was never terra nullius or empty land.

In 1997, a national inquiry was set up on tracking the Stolen Generation, resulting in the “Bringing Them Home” report. Australia’s Parliament and all provincial governments issued statements recognising and publicly apologising to those generations.

**Why then does the referendum appear likely to fail?**

For the referendum to be passed, more than 50 per cent of voters must vote in favour nationally, plus the majority of voters in the majority of Australian states.

Any constitutional alterations in Australia require a national referendum. Voting is compulsory for all adults.

Opposition parties like the Liberal Party of Australia and the Nationals have opposed the referendum. The ‘No’ campaign has argued that details of the proposed body — such as the members it would include, their powers, etc. — have not been made clear. There is also an argument that saying ‘Yes’ would amount to dividing Australian society on the lines of race.

A section of the indigenous people too have rejected the proposal of having a consultative body, saying it would be toothless, and without real power. They have argued for a formal treaty for a substantial transfer of power between the government and indigenous people.

**WHY ARE CASES AGAINST YUNUS DRAWING ATTENTION?**

**The story so far:**

In May this year, the Anti-Corruption Commission (ACC) filed a case against several members of the board of directors of Grameen Telecom, that included Nobel laureate Dr. Mohammad Yunus,



over allegations that the board was involved in misusing funds from the workers. This was one of the several complaints against Mr. Yunus, the 2006 winner of the Nobel peace prize, known for his unique venture of microfinancing in Bangladesh. In the backdrop of a slew of official investigations by the Sheikh Hasina government, an open letter by 175 global leaders that included Nobel laureates called for the withdrawal of judicial cases against Mr. Yunus.

#### **How is the U.S. playing a role?**

Over the past several years, the Bangladesh government has faced sustained criticism from the U.S. government, especially from the U.S. State Department for alleged democratic backsliding on human rights issues. In this context, the support from senior figures within the U.S. establishment like the former Secretary of State Hillary Clinton, has made Mr. Yunus a representative figure of U.S.'s diplomatic pressure and a rival to the Sheikh Hasina government. It is this angle that has added an international and political dimension to the cases against Mr. Yunus.

#### **Does he pose a political challenge?**

Mohammed Yunus received the Nobel prize in 2006 when Sheikh Hasina was out of power and Bangladesh was being ruled by a military-backed caretaker government. It was also a phase when Bangladesh faced the threat of terrorism repeatedly. In 2007, Mr. Yunus issued an advertisement in a leading newspaper seeking public opinion about him launching a political party. That was the first and the most prominent indication of his political intent. Sheikh Hasina was in jail at that time for nearly 11 months under charges of extortion.

Since the beginning of the second term of Sheikh Hasina's government in 2009, Mr. Yunus has faced increased scrutiny for his initiatives. In October 2019, a Dhaka court even issued an arrest warrant against him after he failed to appear in person in a case of alleged violation of labour law. His famed model of financial support to women of rural Bangladesh has also come under the scrutiny of the Bangladesh government. However, in the backdrop of the U.S.'s campaign, there has been a hushed demand for a "third alternative" or a government that will not be led by the Awami League or its political rival the Bangladesh Nationalist Party (BNP).

#### **What is the third alternative?**

Bangladesh is in a state of political stalemate between the ruling Awami League and the BNP. On the one hand, there is the Awami League government that is not in favour of holding elections under a caretaker government and on the other hand there is the BNP that wants elections under a caretaker government. Then there is another section in Bangladesh who, with the support from the U.S., has silently championed the third alternative which will be led by Mr. Yunus. The fact that Mr. Yunus enjoys the support of the Americans who critique Sheikh Hasina has made him a political rival of sorts for Ms. Hasina.

#### **What is the PM's position?**

In response to concerns for Mr. Yunus, Sheikh Hasina has said that international observers are welcome to join the probe. More investigators joining the probe will further unmask him, Ms. Hasina said. This, however, does not indicate that political shadow boxing has ended between the two. The investigation that Ms. Hasina's government began in 2009-11 has reached a critical phase. The trial of Mr. Yunus began on August 22 and focuses on his reluctance to obey the labour laws of Bangladesh. Various outfits like the Department of Inspection for Factories and Establishments are involved in taking the cases forward. Charges against Yunus include failure of



Grameen Telecom in regularising 101 staff members and a workers' welfare fund. The biggest but unspoken allegation against Mr. Yunus is that he abused his celebrity status to avoid accountability.

## HOW THE JEWS FIRST MIGRATED TO PALESTINE, AND HOW ISRAEL WAS BORN

While the modern contours of the Israel-Palestine conflict are well-known — Palestinians saying Israel was forcibly established on their homeland, Israel claiming it has every right to exist on its Biblical homeland — how did the Jewish migration to 'Israel' first begin? Before the official declaration in May 1948 of the creation of Israel, how was the stage set for it? What was the role played by the British and other Arab powers?

### Anti-semitism and Zionism

According to the Hebrew Bible, 'Israel' is the name God gave to Jacob, the grandson of Abraham, who is considered the patriarch of all three 'Abrahamic' religions: Judaism, Christianity, and Islam. The descendants of Abraham settled in Canaan, which is roughly the territory of modern Israel.

Cut to millenia later, to the late 19th century, when the land of Canaan was a part of the Ottoman Sultanate after passing through several empires (Greeks, Romans, Persians, Crusaders, Islamists, to name a few). The followers of Judaism, or Jews, were living in many countries — often as prosperous minorities, but vulnerable to persecution, especially in Europe.

In Imperial Russia, there were pogroms targeting Jews in the 1880s. In France, the Dreyfus affair of 1894, in which a Jewish soldier was falsely convicted of passing on vital information to Germany, highlighted the prevalent anti-Semitic prejudices. A feeling began to grow in the Jewish community that they would not be safe till they had a country to call their own. This movement — of trying to establish a Jewish homeland — came to be known as Zionism.

In 1896, Theodor Herzl, an Austro-Hungarian, published a pamphlet called 'Der Judenstaat', describing his vision of a Jewish nation. This pamphlet attained such popularity that Herzl is considered the father of political Zionism.

Initially, countries like Uganda and Argentina were considered as potential locations for this homeland. However, opinion soon settled on Palestine, where the biblical home of the Jews had once stood, and where many of their holy sites were still located.

### Before World War I

Soon, Jewish migration (Aliyah) to Palestine began. The first wave of arrivals, from 1881 to 1903, is known as the First Aliyah. The migrants began to buy large tracts of land and set to farming it. Very soon, these arrivals meant losses for the native Palestinians, but it was some years yet before the conflict would be framed in these terms.

Palestine at this time was just one province of the vast and not-well-governed Ottoman empire. The residents did not necessarily see themselves as 'Palestinians', identifying more as Ottoman subjects, Arabs, Muslims, or along clan and family lines. Absentee landlordism was common. Thus, land was being sold to Jews by landowners who did not live in those parts and by Ottoman officials who were open to bribing. Local residents and actual tillers of the land — rural, poor, and not very literate — had little say in it.





As the new settlers came in, it soon became clear they were not here to assimilate. Unlike the Jews who had always lived in Palestine, these new residents spoke little Arabic and mingled only among themselves. While earlier, Arab labourers were hired to work on their farms, as more and more Jews poured in, this too became infrequent. Also, earlier, when land changed hands, the tenants had stayed on to work under the new master. However, when a Jew bought land, the Arab tenants were often let go, dispossessed of their home and community.

The Jews marked out their different — and ‘superior’ — status in many other ways. Agriculture was mechanised, electricity brought in. Driven by the mission to create an ideal homeland, they did not take to the local ways. Their towns and settlements followed European sensibilities — Tel Aviv, founded in 1909, being a case in point — and gleamed distinct from the humble Arab neighbourhoods. The enterprise in Israel was being funded by wealthy Jews abroad, like the Rothschild family.

Local alarm and resentment against the newcomers grew. Ottoman officials did forbid the sale of land to foreign Jews, but the order was never effectively implemented. In 1908, after the Young Turks revolution overthrew the Ottoman Sultan, Jewish migration efforts became more streamlined.

Outside Palestine, Jews in other countries worked to gain international support for their cause.

#### **The Balfour Declaration**

What possibly changed the face of West Asia forever was the Balfour Declaration of 1917, when a letter sent by a British official to a wealthy British Jew sealed the fate of lakhs of Palestinians. The British government needed Jewish support in its World War I efforts. To secure that, Foreign Secretary Arthur James Balfour backed the Zionist cause.

His letter to Baron Lionel Walter Rothschild read: “His Majesty’s Government view with favour the establishment in Palestine of a national home for the Jewish people, and will use their best endeavours to facilitate the achievement of this object, it being clearly understood that nothing shall be done which may prejudice the civil and religious rights of existing non-Jewish communities in Palestine, or the rights and political status enjoyed by Jews in any other country.”

This would become the template for many future resolutions on Palestine — while there would always be some lines about the “rights of Palestinians”, little would be done on the ground about it.

By now, Palestinian nationalism was growing. Various groups and organisations had come up to voice opposition to the growing Jewish influence. However, these were ridden by factionalism, and lacked the organisation and single-minded focus of the Jewish bodies.

Also, the long-simmering conflict had created enduring hostility and mistrust between the two communities, and was flaring up into sporadic instances of violence.

#### **British Mandate and World War II**

After the defeat of the Ottoman empire in World War I, its erstwhile domains were divided among the Allies, with the eventual aim of promoting self governance. Palestine fell under the British mandate. The three decades of the Mandate saw various commissions, white papers, and resolutions, even as violence raged and thousands of lives were lost, only for the ‘Palestine question’ to end up at the UN in 1947.



The Arab frustration and feelings of being cheated were erupting into attacks on Jewish settlements, on railroad tracks, on civilians. They were also resisting the British, believing that freedom from the British was essential in solving the Jew problem.

Jews by now had efficient intelligence wings and trained, disciplined militias.

Moderate Jews had long advocated that Arab rights should be accommodated. They began losing influence in the community.

On the Arab side, broadly two rival factions emerged, under the Grand Mufti of Jerusalem Mohammed Amin al-Husseini and the influential Nashashibi family. The armed resistance groups were often entirely dissociated from the political resistance factions.

There were some attempts at talks between Jews and Arabs, notable being a 1919 pact, that soon came to nothing.

World War II and the Holocaust brought much international sympathy to the Jewish cause. Training with British soldiers also brought much more discipline and lethal power to the Jewish armed groups.

The years 1936 to 1938 saw immense bloodshed, with Palestinians attacking Jews and the British, the British imposing collective punishment on Palestinian villages, and the Jews carrying out killings of their own. The Palestinians call this period 'al-thawra al-kubra', or great rebellion. One of the armed groups was called Black Hand, led by Izzedin al-Qassam. The military wing of Hamas today is called the al-Qassam Brigades.

Around this time, the Peel Commission, set up by the British, proposed partition as the only solution to the problem.

The Jewish side negotiated for better terms, but the Palestinian side boycotted the suggestion.

In May 1939, a White Paper released by the British was much more favourable to the Palestinian side. However, the divided Palestinian leadership did not capitalise on the chance.

Eventually, the British did what they had with Partition violence in India — let trouble simmer to breaking point and then withdraw. In 1947, with neither side agreeing to a partition or any other solution, and distrust and hostility at an all-time high, the British announced they were exiting Palestine, and the question would be settled by the UN.

#### **UN resolution and wars**

Throughout this period, one thing had been clear — the Jewish determination to fight and win. The Jews were very much a minority, but whenever violence broke out, they dominated. British journalist Ian Black in his book 'Enemies and Neighbours' quotes the Zionist military group Haganah as stating, "...that a place where the foot of a Jewish settler has trod, where the blood of a Hebrew defender has been spilled, will not be abandoned by its builders and defenders."

On November 29, 1947, the UN General Assembly voted to divide Palestine into Jewish and Arab states, with Jerusalem under UN control. According to Black's book, "The proposed Jewish state was to consist of 55 per cent of the country, including the largely unpopulated Negev desert. Its population would comprise some 500,000 Jews and 400,000 Arabs... The Arab state was to have



44 per cent of the land and a minority of 10,000 Jews.” The Arab areas would include the West Bank and Gaza.

The outraged Palestinian side rejected the resolution. Israel, on the other hand, declared independence on May 14, 1948. This entire period was marked by civil war, and the Israeli military groups managed to drive out a large number of Palestinians.

Immediately after Israel’s declaration of independence, it was invaded by Egypt, Jordan, Iraq, Syria, and Lebanon. However, the determined Israeli side, bolstered by arms and funds from the US, managed to beat them back.

This was followed by more Arab-Israeli wars, with Israel capturing large territories

Today, of the 193 member states of the United Nations, 139 recognise Palestine, while 165 recognise Israel. Gaza and the West Bank remain under Israeli military control.



## ORIGINAL SIN

The unprecedented surprise attack by Hamas on Israel on Saturday, killing some 700 people, should serve as a reminder of the unsustainability of the situation in the occupied and blockaded Palestinian territories and the dangers that non-state actors such as Hamas pose to Israel, no matter how strong their military and intelligence agencies are. Tensions have been flaring in the West Bank for months, but nobody expected such a coordinated, low-tech yet lethal incursion from Gaza. The West Bank has seen violence on a daily basis in recent months. Before Saturday’s attack, some 200 Palestinians and 30 Israelis were killed this year alone. The Benjamin Netanyahu government largely ignored the violence, and went ahead with its other policy preferences, including the overhaul of the judiciary. The Israeli military described the situation in Gaza as “stable instability”, noting that the situation, though volatile, was under control. And then came the Hamas attack, reminiscent of the 1973 Yom Kippur war when Egypt and Syria shook Israel. Hamas, an Islamist militant organisation that carried out suicide attacks in the 1990s and early 2000s, showed no distinction between civilians and soldiers, dealing the bloodiest blow to Israel in recent history.

The attack raises moral and pragmatic questions. Hamas’s indiscriminate violence against Israeli civilians is repugnant and is not going to help the Palestinian cause in any way. On the contrary, it will put more Palestinian lives at risk as Israel, equally disregarding civilian casualties, is pounding the besieged enclave. But at the same time, Palestinian territories, under the yoke of the longest occupation in modern history, have been a fuming volcano. There is no peace process. Israel has continued to build settlements in the West Bank, raising security barriers and checkpoints,





limiting Palestinian movements, and never hesitating to use force or collective punishment to keep organised Palestinians under check. This status quo has only turned Palestinians more radical and Hamas even stronger. Israel has now declared war. But past attacks — ground invasions and air strikes — have done little to weaken Hamas. West Asia has also witnessed geopolitical realignments in recent years — from the Israel-Arab reconciliation to the Iran-Saudi détente. But these changes have conveniently sidestepped the occupation of Palestine, West Asia's original sin, letting the status quo prevail. But the status quo cannot prevail without consequences. If Israel and other regional and international players want lasting peace and stability in the region, their focus must turn to finding a solution to the question of Palestine. The military operations without addressing the core issue would only be cosmetic interventions.

## WHY DID HAMAS LAUNCH A SURPRISE ATTACK ON ISRAEL?

Just last week, the Israeli Defence Forces (IDF) said Gaza was in a state of “stable instability”. Yet, on Saturday morning, Israel witnessed the largest attack from the enclave — and perhaps the worst security crisis in 50 years — when dozens of Hamas militants, using motorcycles, pickup trucks, boats, paragliders and mid-range rockets, launched a highly coordinated attack, infiltrating Israeli cities, hitting military bases and killing and taking hostage soldiers and civilians. The attacks, reminiscent of the 1973 Yom Kippur holiday attack by Egyptian and Syrian troops, took Israel by surprise, raising questions on intelligence failure. Israeli media reports say at least 200 people were killed.

While it's too early to draw conclusions on the possible impact of the attack on Israel's continuing occupation of the Palestinian territories, one question that demands urgent attention is why did Hamas launch such a massive incursion into Israel knowing that the response would be disproportionate. At least three factors — Palestinian, Israeli and geopolitical — could have influenced Hamas's thinking.

### **Deepening occupation**

Firstly, Palestine-Israel relations have steadily deteriorated in recent years. Israel has been carrying out military raids in the occupied West Bank almost on a daily basis. At least 200 Palestinians and some 30 Israelis have been killed so far this year. In April, Israeli police raided Jerusalem's Al Aqsa Mosque compound, Islam's third holiest place of worship, triggering rocket attacks from Gaza, which were followed by Israeli air strikes. In July, Israel carried out a major raid in the West Bank town of Jenin.

Currently, there is no peace process. Violence is perverse. And anger has been building up among Palestinians against both the Israeli occupiers as well as the Palestinian Authority, the provisional administration of the West Bank that is led by President Mohammad Abbas's Fatah. By launching such a massive attack from Gaza (which is controlled by Hamas) and asking “all Arabs of Palestine”, including the Israeli Arab citizens to take up arms against the state of Israel, Hamas is both trying to cash in on the public anger against occupation and emerge as the sole pole of the Palestinian cause.

### **Divisions in Israel**

Secondly, Israel is also going through a difficult phase. The country is ruled by its most right-wing government whose key domestic agenda is to overhaul the structures of power so that the elected government would be more powerful than other institutions. The government has already pushed



one part of its ambitious legislative agenda seeking to curtail the powers of the judiciary through Parliament, which triggered massive protests. Thousands of military reservists, the backbone of the IDF, had joined the sit-ins and threatened to resign in protest against the Netanyahu government's judicial overhaul plan. So the government's focus was on its legislative agenda; rights groups are up in arms showing deep divisions in society; and there were resenting voices even within the military. Hamas might have thought that Israel was at a weak moment internally, which provides an opportunity for it to launch an unprecedented attack from Gaza and trigger more violence in the occupied West Bank.

### Geopolitical angle

Lastly, it is unlikely to be a coincidence that the Hamas attack came when Israel and Saudi Arabia are in an advanced stage of normalisation talks. Recently, Saudi Crown Prince Mohammed bin Salman said in an interview that both countries were making progress every day. If Saudi Arabia, the custodian of the two holiest mosques of Islam and arguably the most influential Arab country, normalises ties with Israel (a deal which is being pursued actively by the Biden administration), it would not only reset West Asian geopolitical dynamics but also put Hamas at a further disadvantageous position.

Such a realignment is also not in the interests of Iran (which backs the Islamic Jihad and Hamas) and Lebanon's Hezbollah, which has its own problems with Israel. Iran and Hezbollah were quick to welcome the Hamas operation, describing it as "heroic". As Gaza is set to witness massive Israeli retaliation in the coming days, if not weeks, the prospects for an immediate normalisation deal between Saudi Arabia and Israel would be further complicated

## WHAT IS HAMAS, THE PALESTINIAN MILITANT GROUP?

"We have decided to put an end to all of the occupation's crimes. The time is over for them [Israel] to [continue to] act without accountability," said Mohammad Deif, the shadowy commander of al-Qassam Brigades, Hamas's military wing, on October 7. His audio statement was telecast on TV after Hamas launched an unprecedented attack that caught Israel by surprise. "Thus, we announce the 'al-Aqsa Flood' operation," he said. The rest is history. Hamas carried out its largest attack on Israel from Gaza, killing at least 900 people and leaving the bloodiest blow to Israel in decades. In response, Israel has declared war on the outfit, killed over 700 Gazans in air strike and is preparing for a major ground offensive. The Palestine issue is back to the fore of the West Asian cauldron.

### The roots

The roots of Hamas go back to the Muslim Brotherhood. The Brotherhood, established by Egyptian Islamist Hasan al-Banna in 1928, made a presence in the British-ruled Palestine in the 1930s. Its focus had been on reorienting Muslim society, while the Palestine Liberation Organisation (PLO), founded in 1964, championed the Palestinian nationalist sentiments.

The Brotherhood's approach was that the time for "jihad" had not come yet and they should first rebuild a stronger, pious Islamic society — they called it "the upbringing of an Islamic generation". During this time, Israel established contacts with the Brotherhood leadership in the occupied territories. Sheikh Ahmed Yassin, the physically challenged, half-blind cleric of the Brotherhood, established al-Mujamma' al-Islam (The Islamic Centre) in 1973. Israel recognised the Centre first as a charity and then as an association, which allowed Yassin to raise funds, build mosques and set up educational institutions, including the Islamic University of Gaza. But the 1979 Islamic



Revolution in Iran changed the landscape of Islamist politics across West Asia. Islamist organisations, having witnessed the political success of the Mullahs in Iran, started becoming politically more ambitious and active.

### **The rise**

Hamas was established after the first intifada broke out in 1987. The occupied territories were swept by a mass uprising. The Brotherhood found it an opportunity to enter the struggle against the occupation.

On December 14, the Brotherhood, under the leadership of Yassin, issued a leaflet, asking Palestinians to stand up to the Israeli occupation. In January, they issued another leaflet under the name Harakat al-Muqawamah al-Islamiyyah (the Islamic Resistance Movement) — in short, Hamas, which means “zeal” in Arabic. In 1989, Hamas launched its first attack, abducting and killing two Israeli soldiers.

Unlike the PLO, which was modelled around the leftist guerrilla national movements in the third world, Hamas had a completely different vision. The charter it issued on August 19, 1988 was studded with anti-Semitic remarks. According to the charter, Palestine is “an Islamic Waqf land consecrated for Moslem generations until Judgement Day”; “there is no solution to the Palestine problem except jihad” and all peace initiatives are a “waste of time and acts of absurdity”. It opposed the Oslo agreement, which allowed the formation of the Palestinian Authority. When the PLO recognised Israel, Hamas rejected the two-state solution and vowed to liberate the whole of Palestine “from the [Jordan] River to the [Mediterranean] Sea”.

### **The evolution**

In the 1990s and early 2000s, Hamas conducted several suicide attacks, targeting Israelis. In 2000, when the second intifada broke out, Hamas was in the driving seat. Israel had taken a policy of targeted assassinations. In March 2004, Israel killed Sheikh Yassin with a helicopter-fired missile in Gaza city. Abdel Aziz al-Rantisi, Yassin’s successor, was killed in April 2004. Khaled Meshal, another top leader survived an attempt on his life by Mossad in Jordan. Hamas continued to remain defiant, targeting Israeli troops and settlers. In 2005, faced with Hamas’s violent resistance, Israel unilaterally decided to pull out of Gaza.

Hamas’s violent tactics and Israel’s collective punishment of Palestinians in return seemed to have helped the Islamists gain popularity. In the 2006 legislative elections in the Palestinian territory, Hamas won 74 out of the 132 seats, while the Fatah party, the PLO’s backbone, got only 45 seats. In its election manifesto, Hamas showed, for the first time, signs of moderation. It dropped the call for the destruction of Israel, which was mentioned in the 1988 charter, and said its first priority was to change the situation for Palestinians.

Hamas formed the government, but faced opposition from Israel and most international powers. As tensions rose between Fatah and Hamas in the West Bank, Palestinian President Mahmoud Abbas dissolved the Hamas government. This led to violent clashes between Fatah and Hamas. Fatah ousted Hamas from the West Bank and Hamas ousted the former from Gaza in 2007. Since then, Hamas is the government in Gaza.

While Hamas never gave up its right to armed resistance, the organisation signalled changes in its outlook over the years. It still refuses to recognise Israel but offered hudna (a lasting ceasefire) if Israel returned to the 1967 border. In 2017, it adopted a new charter from which the anti-Semitic



remarks of the original charter were expunged. The new document stated Hamas is not seeking war with the Jewish people — but with Zionism that drives the occupation of Palestine. “Hamas advocates the liberation of all of Palestine but is ready to support the state on 1967 borders without recognising Israel or ceding any rights,” it said. But Saturday’s attack, which indiscriminately targeted both Israeli troops and civilians, suggests that Hamas has returned to its original tactics.

Israel Prime Minister Benjamin Netanyahu has vowed to destroy the enemy. Israeli retaliation would “reverberate” across West Asia, he thunders. But Israel will have to factor in two realities when it sets the goals of its military operation. Hamas may not have the capability to push Israel back to the 1967 border. But the Islamist group has emerged as the main pillar of Palestine’s political landscape, which in the past had largely been driven by secular nationalism. A solution to the Israel-Palestine problem cannot be reached without taking Hamas into consideration — unless Hamas is totally destroyed.

Two, Hamas survives. Over the years, Hamas has lost most of its founding leaders, it has been categorised as a terrorist outfit and faced Israeli attacks frequently. But it survived, to fight another day. This is Mr. Netanyahu’s biggest test this time.

### WHAT WAS THE YOM KIPPUR WAR, AND WHY IS THE HAMAS ATTACK ON ISRAEL BEING COMPARED TO IT

The surprise attack by Hamas on Israel Saturday (October 7) has brought back memories of the Yom Kippur war, which started 50 years and a day ago, and reset equations in the Middle East forever.

What was the Yom Kippur war, and why is the current conflict being compared to it? We explain.

#### **Why is the current violence being compared with the Yom Kippur war?**

For one, this has been the deadliest attack on Israel since the Yom Kippur war of 1973. Gunmen from Hamas carried out a rampage in Israeli towns on Saturday, killing at least 400 Israelis so far and abducting many civilians. In retaliation, Israeli strikes have killed at least 313 Palestinians. In the Yom Kippur war, more than 2,500 Israeli soldiers were killed.

The second similarity is the criticism within Israel for the state being found unprepared. The attack on Saturday came as a surprise, despite Israel’s advanced intelligence and interception systems. The Yom Kippur war, too, had found Israel unprepared, with many soldiers on leave because of Yom Kippur or the Day of Atonement, the holiest day in Judaism.

Saturday’s attack came when many Israelis were preparing to observe Simchat Torah, which marks the end of the annual cycle of public Torah readings, and the beginning of a new one. The Torah constitutes the first five books of the Hebrew Bible.

#### **What was the Yom Kippur war?**

The Yom Kippur war, or the October war, or the Ramadan war, was fought between Israel on one side and Egypt and Syria on the other, from October 6 to 25, 1973. It is also called the Fourth Arab-Israeli war, coming after three wars in 1949, 1956, and 1967.





After its decisive victory in the Six-Day War of 1967, Israel had acquired an aura of invincibility, and also captured territories from its neighbours, including the Golan Heights from Syria and the Sinai Peninsula from Egypt.

Six years later, the two countries launched a coordinated attack on Israel. While Israel was aware of troops mobilisation, it had not expected an attack in the Holy Islamic month of Ramadan. Caught by surprise, Israel took time to mobilise its own soldiers, many of whom were on leave for Yom Kippur. Thus, initially, both Syria and Egypt made some gains.

Israel was able to stem the advance on both Syrian and Egyptian sides after three days and soon launched its own counterstrikes. Meanwhile, the US and the Soviet Union stepped in to back Israel and Egypt-Syria respectively, and tensions between the superpowers escalated dangerously.

The first ceasefire, brokered by the UN on October 22, did not hold. However, by October 25, a lasting ceasefire had been arrived at, with Israel's reputation of invincibility dented.

#### **What is the significance of the Yom Kippur war?**

If Israel managed to beat back both attackers, why is Yom Kippur still seen as a game-changer? This was because its scramble to rally troops initially, and the heavy casualties it suffered, made it clear that Israel could be battered, if not beaten, in battle. Six months after the war, Prime Minister Golda Meir and her cabinet resigned.

In fact, many analysts believe that Egypt's strategy behind launching the attack was not necessarily to defeat the militarily superior Israel, but to bruise it enough to bring it to the negotiating table.

After the ceasefire, a peace process was set in motion. Under the 1978 Camp David Accords, Israel returned the Sinai Peninsula to Egypt. The 1979 Egyptian-Israeli peace treaty was the first instance of an Arab country recognising Israel as a state.

For Syria, however, the war brought no happy consequences. The Israel-Egypt peace deal had nothing for Syria, and Israel in fact ended up occupying even more of the strategically important and fertile plateau of Golan Heights, which it holds to this day.

#### **WHY GAZA IS KNOWN AS THE WORLD'S BIGGEST 'OPEN AIR PRISON'**

After Hamas militants on Saturday launched the biggest assault on Israel in decades, the country's defence minister, Yoav Gallant, ordered a "complete siege" of the Gaza Strip. "There will be no electricity, no food, no water, no fuel – everything is closed," he said.

Israel is able to impose such conditions on Gaza because the Palestinian enclave has been under an air, land and sea blockade since 2007.

A strip of land wedged between the Mediterranean Sea to the west, Israel to the north and east, and Egypt to the south, Gaza is home to more than 20 lakh Palestinians. It has been under military occupation since 1967, and even though Israel maintains that it pulled out in 2005, the United Nations, the European Union and other international organisations still consider Gaza as occupied territory.





The conditions created by the occupation and the blockade have led many, including UN experts, intellectuals, rights groups and even former British Prime Minister David Cameron, to refer to Gaza as an “open air prison”.

### **The beginning of the Gaza blockade**

In the Six-Day War of 1967, Israel captured Gaza from Egypt, and began its military occupation of the territory. Between 1967 and 2005, Israel built 21 settlements in Gaza and urged Palestinian residents, through coercive measures as well as by giving financial and other incentives, to leave the territory. However, that period saw rising Palestinian resistance, both violent and non-violent, against the Israeli occupation.

In 2005, Israel withdrew its settlements from Gaza. Between then and 2007, it imposed temporary blockades on the movement of people and goods into and out of Gaza on multiple occasions.

Under the 1993 Oslo Agreement, the Palestinian Authority got administrative control over Gaza after Israel pulled out, and an election was held in 2006. The voting took place at a time when an Israeli blockade was in force, and the militant group Hamas won a majority of seats. Following the election, deadly violence broke out between Hamas and Fatah, another Palestinian political faction, leading to the death of hundreds of Palestinians.

In 2007, after Hamas assumed power in Gaza, Israel made the blockade permanent. Egypt, which also has a border crossing with Gaza, participated in the blockade. This effectively meant that most people could not go into or out of Gaza and that the movement of goods and aid was highly restricted. Israel justifies the blockade as being necessary for its security.

### **Walls and crossings**

With walls on three sides and the Mediterranean on the fourth, Gaza Strip is surrounded by physical barriers.

In 1994, Israel built a 60-km-long fence along its border with Gaza. That has since been upgraded several times and a sophisticated border security system has emerged, including walls that are 7 metres tall with sensors and remote-controlled machine guns at areas where the border passes near Israeli settlements. There are also underground walls to prevent any movement through tunnels.

Walled-off from the north and the east by Israel, Gaza’s southern border also got a wall when Egypt, with the help of the US, started constructing a 14-km steel border barrier. It also built underground barriers to block smuggling tunnels. In the west, Israel controls the sea route into Gaza and doesn’t allow it be used for the transfer of people or goods.

Currently, there are three functional border crossings between Gaza and the outside world – Karem Abu Salem Crossing and Erez Crossing controlled by Israel, and Rafah Crossing controlled by Egypt. Since Saturday’s attack on Israel, all three crossings have been effectively sealed.

### **Densely populated and impoverished**

The Gaza Strip is 41 km long and 12 km wide at its widest point. More than 20 lakh residents live in a total area of just around 365 sq km, making it one of the most densely populated areas in the world.



According to a report published last year by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the blockade has “undermined Gaza’s economy, resulting in high unemployment, food insecurity and aid dependency”.

This has led to around 61% of Gaza’s population requiring food aid, 31% of households having difficulty in “meeting essential education needs such as tuition fees and books, due to lack of financial resources”, and an unemployment rate of more than 46%, the report said. It also highlighted the shortage of electricity, leading to power cuts at an average of around 11 hours per day. “The blockade has raised concern about collective punishment and other possible violations under international humanitarian and human rights law,” the report said.

The blockade also makes it very difficult for people from Gaza to go to the bigger Palestinian territory of West Bank, where many have familial and business connections. Many in Gaza also rely on going to the West Bank for medical treatment, but under the blockade, this is only possible after a long verification process conducted by Israel, which has a high rate of rejections.

### ‘Open air prison’

“There is no other way to define the regime that Israel has imposed on the Palestinians – which is apartheid by default – other than as an open air prison,” Francesca Albanese, the UN Special Rapporteur on human rights in the occupied territories, said in July this year.

She used the term “open air prison”, which has been widely used over the years by academics, activists and journalists to describe the conditions in Gaza under the blockade. “It hardly takes more than a day in Gaza to appreciate what it must be like to try to survive in the world’s largest open-air prison,” noted linguist and public intellectual Noam Chomsky wrote in 2012.

Even heads of government allied to Israel have used the term in the past. In 2010, then British PM David Cameron referred to Gaza in Parliament as “a giant open prison”.

## HAMAS-ISRAEL ESCALATION: WHAT WE KNOW SO FAR, AND WHETHER IT COULD LEAD TO THE THIRD INTIFADA

Intifada is an Arabic word that means to ‘shake off’. It came into popular usage in December 1987, with Palestinians using it to describe their uprising against the Israeli presence in the West Bank and Gaza. Palestinian-American scholar Edward Said, in a 1989 essay titled ‘Intifada and Independence’, described the intifada as the response of a people pushed to the wall by the “bare-knuckled” Israeli attempt to rob them of their history, land and nationhood.

The First Intifada lasted from 1987 to 1993, and the Second Intifada from 2000-2005. These were extremely popular uprisings spearheaded by Palestinian youth sick of the treatment they faced from the much more powerful Israeli settlers in their own homeland.

Since the end of the Second Intifada, tensions between Israel and Palestine have not quieted down. Israel has continued to expand its presence in Palestinian territories while Palestinian organisations such as the PLO and Hamas, have stepped up terror attacks and bombings.

Many have been wary of a ‘Third Intifada’ for years, especially amidst the rise of the ultranationalist far-right in Israel with its extreme position on Palestine. Israel has also carried out multiple raids of the holy Al-Aqsa Mosque in Jerusalem this year, further heightening tensions and eventually leading to Hamas’s latest operation, named after the mosque, earlier today.



## NATION

### BALANCING POLICY

Within hours of the massacre of Israeli citizens by Hamas fighters last Saturday, Prime Minister Narendra Modi tweeted India's solidarity with Israel. While the histories of their conflicts and the scale of violence have been very different, India has faced terror attacks all too often to not feel the pain in Israel where teenagers at a concert, children in a park, grandparents at home, and even babies in cribs were gunned down, amidst other atrocities Hamas carried out, including taking dozens hostage. The sentiments were repeated when Mr. Modi spoke to Israel Prime Minister Benjamin Netanyahu, condemning terrorism in all its forms. India's second big concern has been the safety of its citizens, especially as Israel began retaliatory strikes on Gaza. Around 18,000 Indians work or study in Israel, in addition to about 85,000 Israelis of Indian origin (from Maharashtra, Manipur, Mizoram, Kerala, and West Bengal). The Ministry of External Affairs (MEA) has chartered flights to bring them home. New Delhi has also added nuance to the initial position, with the MEA delivering the government's first formal statement. While repeating the condemnation of the Hamas attacks, the statement reminded Israel about the "universal obligation to observe international humanitarian law", as it carries out "global responsibility to fight the menace of terrorism...." In addition, the MEA reiterated its "long-standing and consistent" position on the Palestine issue.

The statement is a reminder of the tightrope India has walked since 1992, when New Delhi established full diplomatic ties with Israel, while continuing to support the Palestinian cause. There has been a shift towards Israel's position, given increasingly close bilateral relations, trade, technological assistance, military procurement, and counter-terrorism cooperation. In 2017, Mr. Modi became the first Indian Prime Minister to visit Israel, while in 2018, Mr. Netanyahu visited India. However, Mr. Modi was also the first Indian Prime Minister to make an official visit to Palestine. In 2017, India voted against the U.S. and Israel for an attempt to declare unilaterally all of Jerusalem as the Israeli capital. The policy lines New Delhi is continuing to draw seem clear: to abhor terrorism, but not to condone indiscriminate reprisal bombings, even as it holds its consistent position on Palestine. No claim to righting historical grievances can possibly be used by Hamas to explain its inhuman attacks on Israel. However, a responsible state cannot behave like an insurgent group, and Israel's latest demand, that more than a million Gaza residents must evacuate as it continues to pound the city and plans a possible ground offensive, will make Delhi's challenge at balancing policy even more complex.

### 'OPERATION AJAY' SET TO EVACUATE INDIAN NATIONALS FROM ISRAEL

India is putting in place a major operation to evacuate its citizens who wish to return from conflict-hit Israel. Announcing the initiative late on Wednesday, External Affairs Minister S. Jaishankar said special chartered flights are being arranged.

This will be the second evacuation this year, after Operation Kaveri that brought back several thousand Indian citizens from conflict-torn Sudan in April-May.

"Launching Operation Ajay to facilitate the return from Israel of our citizens who wish to return. Special charter flights and other arrangements being put in place. Fully committed to the safety and well-being of our nationals abroad," posted Mr. Jaishankar on X, formerly Twitter.



The Indian Embassy in Tel Aviv stated that it has emailed the first lot of registered Indian citizens for the special flight that is expected to take off for India on Thursday. “Messages to other registered people will follow for subsequent flights,” said the embassy in a post on X.

The announcement has come days after Air India suspended its service in the Delhi-Tel Aviv route as Hamas carried out a crippling attack on Israel last Saturday.

Following that ground, sky and sea attack, Israel has launched a massive military strike against Gaza Strip. The rapid escalation has also drawn the Hezbollah in southern Lebanon, which has lobbed rockets at Israel’s northern territory drawing Israeli strikes. The situation has turned the sky above Israel risky prompting cancellation of many international flights.

A source indicated that the scale of Operation Ajay will depend on demand and that the government will augment capacities depending on further need.

#### **Control room set up**

India has been preparing for the escalating situation soon after the conflict erupted on Saturday. On Wednesday, the Ministry of External Affairs set up a 24-hour control room, which will operate simultaneously from New Delhi, Tel Aviv and Ramallah in the Palestinian territory.

There are at least 900 Indian students who are enrolled in various Israeli universities and institutions. That apart, a large number of traders, IT professionals and domestic workers and caregivers work in Israel. A significant part of Israeli population consists of Indian-origin Jews who trace their background to Kochi, Kolkata and Mumbai.

After the outbreak of the hostilities, Meghalaya Chief Minister Conrad Sangma had brought to notice that pilgrims were stuck in Bethlehem in Palestinian territories and sought assistance from the External Affairs Minister to evacuate them.

### **HOW INDIA-ISRAEL TIES PROGRESSED: FROM PALESTINE-LEANING TO A STRATEGIC EMBRACE OF THE JEWISH NATION**

India’s political attitude towards Israel was set quite firmly shortly after independence in 1947, when Jawaharlal Nehru and Mahatma Gandhi vowed to support the Palestinian cause as they rejected the idea of two nations on the basis of religion. While they had sympathy for the Jews, both were of the view that any State based on religious exclusivity could not sustain on moral and political grounds. This was in sync with their opposition to the partition of India.

India’s position with regard to Palestine was also guided by the general consensus in the Arab world, the Non-Aligned Movement, and the United Nations.

When the partition of Palestine plan was put to vote at the UN, India voted against, along with the Arab countries. When Israel applied for admission to the UN, India again voted against. New Delhi, however, recognised Israel on September 17, 1950, after two Muslim-majority countries, Turkey and Iran, did so. In 1953, Israel was allowed to open a consulate in Mumbai, but no diplomatic presence was granted in New Delhi.

In the late 1960s and early 70s, with the Palestine Liberation Organisation (PLO) emerging as the representative of the people of Palestine under Yasser Arafat, India developed its engagement with the largest political grouping under PLO, Al Fatah.





On January 10, 1975, India recognised PLO as the sole and legitimate representative of the Palestinian people and permitted it an independent office at New Delhi.

While India was one of the last non-Muslim states to recognise Israel, it became the first non-Arab state to recognise the PLO.

#### **Under Indira and Rajiv Gandhi**

In 1980, when Indira Gandhi returned to power with a thumping majority, she continued her support to the Palestinian struggle. India upgraded the PLO office to that of an embassy endowed with all diplomatic immunities and privileges.

Arafat became a frequent visitor to Delhi through the early 80s, and the relationship between India and Palestine strengthened. In March 1983, when the NAM summit took place in India, it came up with a strong statement of solidarity for Palestine. In April 1984, PM Indira Gandhi visited Arafat's headquarters in Tunis after a state visit to Libya. When she was assassinated six months later, Arafat attended the funeral and wept in public.

Rajiv Gandhi continued with India's approach towards Palestine, and throughout the outbreak of the Palestinian intifada (uprising) in December 1987 in Gaza and West Bank due to the 'iron fist' policies of Israel, India maintained its steadfast support.

#### **Ground shifts**

However, by this time, there were critics of New Delhi's Palestine policy and its outright support to the Arab world within India. The Arab countries' neutral position during the 1962 India-China war and their support to Pakistan during the 1965 and 1971 wars did not go down well with many, including the BJP. On the other hand, Israel helped India with arms and ammunition in the 1962 and 1965 wars.

Things changed in West Asia when Iraq invaded Kuwait in August 1990. The PLO lost its political leverage on account of its support to Saddam Hussain. Around that time, the Soviet Union disintegrated, and this prompted India to make drastic changes in its policy towards West Asia.

It established full diplomatic relations with Israel in January 1992, days after the Chinese established diplomatic relations with Tel Aviv.

The end of the Cold War weakened the Non-Aligned Movement and reduced the ideological hostility towards Israel.

The emergence of the BJP as a powerful force in Indian politics in early 1990s also removed some hesitations about Israel.

On January 19-20, 1992, Palestinian President Arafat paid an official visit to India. During his meeting with Prime Minister P V Narasimha Rao, he was told that India's establishment of a diplomatic relationship with Israel would be helpful for the Palestinian cause. New Delhi, he was told, could exert influence on Israel only if it had an ambassador in Tel Aviv. Arafat came on board.

After the bilateral conversation with Rao, Arafat in his press conference in New Delhi said, "Exchange of Ambassadors and recognition (of Israel) are acts of sovereignty in which I cannot interfere...I respect any choice of the Indian government".

#### **Military ties and the Kargil war**

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





The establishment of full diplomatic ties with Israel came in especially handy during the Kargil conflict in 1999. The Indian Air Force desperately needed precision target bombs as Pakistani intruders were hiding in caves and bunkers atop mountains in Kargil. The IAF reached out to their Israeli counterparts, who wasted no time. They are understood to have dug into their emergency stockpiles and shipped the weapons to India, which proved to be decisive in the hour of need.

After this, the Vajpayee government sent Foreign Minister Jaswant Singh for the first bilateral visit in 2000. Home Minister L K Advani visited Israel in the summer of 2000, followed by more high-profile visits.

After Modi came to power, there has been much more visibility to the relationship.

During Modi's visit to Israel in 2017 — the first Prime Ministerial visit — he skipped the customary stop at Palestine, which was the norm with previous ministerial visits.

The Modi government, however, had been quite careful about setting up this visit. South Block made sure that the Prime Minister visited Saudi Arabia, Iran, Qatar, and UAE — all regional rivals of Israel — between 2014 and 2017, before the trip to Israel. New Delhi hosted Palestinian President Mahmoud Abbas in May 2017. In all public pronouncements, South Block officials maintained India's position on its support towards the Palestinian cause.

Modi later visited Palestine in February 2018, but didn't visit Israel — achieving a complete dehyphenation of the ties.

#### **In the past decade**

In the last decade or so, ties have deepened in security, defence, and connectivity with Israel, but also with partners in West Asia — Saudi Arabia, Egypt, Qatar and Iran.

The Indian strategic approach to engage with all sides in the complex West Asian region is born out of necessity: the 90 lakh-strong Indian community in the region and connectivity to West Asia and Europe. Crucially, more than 50% of India's energy imports are sourced from West Asia.

The spate of horrifying surprise attacks over the weekend puts India in a diplomatic tight spot. This is because the current hostility tests the Abraham Accords and the efforts towards rapprochement between Saudi Arabia and Israel, which held the promise of reshaping age-old fault lines in the Middle East. India was hoping to reap the dividends of the newfound peace in the region.

### **UN SECURITY COUNCIL REFORM IS A SONG IN A LOOP**

More than three decades after the debate first started over fundamental reforms at the United Nations (UN), the issue appears to have resurfaced at the ongoing General Assembly session of the world body. President Recep Tayyip Erdoğan of Türkiye was blunt: "The Security Council has ceased to be the guarantor of world security and has become a battleground for the political strategies of only five countries." Even the UN's Secretary-General, António Guterres, issued a stern warning: "The world has changed. Our institutions have not. We cannot effectively address problems as they are if institutions do not reflect the world as it is. Instead of solving problems, they risk becoming part of the problem."

It could not have been put more bluntly, but we have heard this song before. Politically, it is untenable that the five permanent members (China, France, Russia, the United Kingdom, and the

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



United States) enjoy their position, and the privilege of a veto over any Council resolution or decision, merely by virtue of having won a war 76 years ago. In the case of China, the word 'won' needs to be placed within inverted commas.

I was serving at the UN when then-Secretary General Boutros Boutros-Ghali declared that Security Council reform must be accomplished in time for the 50th anniversary of the world organisation in 1995. But even as the urgent rhetoric continues to be spoken, the organisation has missed not only the 50th anniversary of the UN, but even the 60th, the 70th and now the 75th. Left to their own devices, member-states will be arguing the merits of the case well past the UN's centenary.

#### **An unjust situation in terms of equity**

The problem of reforming the Security Council is akin to a malady in which a number of doctors gather around a patient; they all agree on the diagnosis but they cannot agree on the prescription. The diagnosis is clear — the Security Council reflects the geopolitical realities of 1945 and not of today. When the UN was founded in 1945, the Council consisted of 11 members out of a total UN membership of 51 countries; in other words, some 22% of the member states were on the Security Council.

Today, there are 193 member-states of the UN, and only 15 members of the Council — fewer than 8%. The one change ever made to the original Charter was in 1965 when the Security Council was expanded from 11 members to 15 by adding four more elected non-permanent members. So, many more countries, both in absolute numbers and as a proportion of the membership, do not feel adequately represented on the body. The composition of the Council also gives undue weightage to the balance of power of those days. Europe, for instance, which accounts for barely 5% of the world's population, still controls 33% of the seats in any given year (and that does not count Russia, another European power).

In terms of simple considerations of equity, this situation is unjust: for starters, to those countries whose financial contributions to the UN outweigh those of four of the five permanent members — Japan and Germany have for decades been the second and third largest contributors to the UN budget, while still being referred to as 'enemy states' in the United Nations Charter (since the UN was set up by the victorious Allies of the Second World War). And it denies opportunities to other states such as India, which by its sheer size of population, share of the world economy, or contributions in kind to the UN (through participation in peacekeeping operations, for example) have helped shape the evolution of world affairs in the seven decades since the organisation was born.

#### **Stances by countries**

So, the Security Council is clearly ripe for reform to bring it into the second quarter of the 21st century. But for every state that feels it deserves a place on the Security Council, and especially the handful of countries which believe their status in the world ought to be recognised as being in no way inferior to at least three of the existing permanent members, there are several who know they will not benefit from any reform. The small countries that make up more than half the UN's membership accept that reality and are content to compete occasionally for a two-year non-permanent seat on the Council. But the medium-sized and large countries, which are the rivals of the prospective beneficiaries, deeply resent the prospect of a select few breaking free of their current second-rank status in the world body. Many are openly animated by a spirit of competition, historical grievance or simple envy. They have successfully and indefinitely thwarted reform of the membership of the Security Council.



Part of the problem is that the bar to amending the UN Charter has been set rather high. Any amendment requires a two-thirds majority of the overall membership, in other words 129 of the 193 states in the General Assembly, and would further have to be ratified by two-thirds of the member states. Ratification is usually a parliamentary procedure, so, in other words, the only 'prescription' that has any chance of passing is one that will both persuade two-thirds of the UN member-states to support it and not attract the opposition of any of the existing permanent five — or even that of a powerful U.S. Senator who could block ratification in Washington.

That has proved to be a tall order indeed. India's credentials may seem obvious to us, but China is none too keen on diluting its status as the only Asian permanent member; Pakistan, which fancies itself as India's strategic rival on the subcontinent, is unalterably opposed; and to some extent Indonesia seems to feel diminished by the prospect of an Indian seat. In Latin America, Brazil occupies a place analogous to India's in Asia, but Argentina and Mexico have other ideas, pointing to Portuguese-speaking Brazil's inferior credentials in representing largely Hispanic Latin America. And while Africa, given that it accounts for 54 member-states, insists on two permanent seats, how is one to adjudicate the rival credentials of the continent's largest democracy, Nigeria, its historically largest economy, South Africa, and its oldest civilization, Egypt? Another proposal suggests creating a second category of "semi-permanent members" to accommodate such states for, say, 10-year electable terms. It has found no takers among the principal aspirants.

#### **Continuing gridlock**

So, while the debate keeps going round in circles for decades, gridlock continues in the Security Council, as most vividly illustrated recently over the Ukraine conflict, when a Permanent Member of the Security Council invaded a sovereign UN member-state and the Council proved powerless to respond. Russia's increasing resort to the veto has blocked resolutions on Ukraine, Mali, Syria and North Korea. Similar obstructionism by the West has affected proposals to reform the financial institutions established at Bretton Woods in 1944, the World Bank and the International Monetary Fund. And yet this is the only global system we have got that brings all countries together on a common platform. Can we afford to let it fade into ineffectiveness and irrelevance?

### **3.21 LAKH APPEALS PENDING WITH INFORMATION COMMISSIONS: REPORT**

More than three lakh appeals and complaints are pending in 27 State Information Commissions across the country and the backlog has been steadily increasing, according to a new report.

Of the 3,21,537 pending appeals, the maximum number was reported in Maharashtra (1,15,524) followed by Karnataka (41,047). Tamil Nadu declined to provide the information.

The 'Report Card on the Performance of Information Commissions in India, 2022-23' said that the 2019 assessment had found that as of March 31 that year, a total of 2,18,347 appeals/complaints were pending in the 26 Information Commissions from which data was obtained, which climbed to 2,86,325 as of June 30, 2021 and then crossed three lakh as of June 30, 2022.

#### **Many defunct**

Four Information Commissions — Jharkhand, Telangana, Mizoram and Tripura — are defunct as no new Information Commissioners were appointed upon incumbents demitting office. Six Information Commissions are currently headless — the Central Information Commission, and the State Information Commissions of Manipur, Chhattisgarh, Maharashtra, Bihar, and Punjab.



The report has been compiled based on the performance of Information Commissions across the country, and on information accessed under the Right to Information (RTI) Act by the Satark Nagrik Sangathan (SNS), a citizens' group working to promote transparency and accountability in governance.

October 12, 2023 marks 18 years of implementation of the RTI Act in India.

The report says that 2,20,382 appeals and complaints were registered between July 1, 2022 and June 30, 2023 by the 28 Information Commissions for whom relevant information was available.

During the same time period, 2,14,698 cases were disposed of by 29 Information Commissions for which information could be obtained. Under the RTI law, Information Commissions are the final appellate authority.

## VENDETTA UNLIMITED

The resurrection of a criminal case dating back to 2010 against writer-activist Arundhati Roy and an academician from Kashmir seems ill-motivated. There can be no other explanation for Delhi Lieutenant Governor V.K. Saxena granting sanction to prosecute Ms. Roy and Sheikh Showkat Hussain, a former Kashmir University professor, for alleged divisive speeches and imputations against national unity made in New Delhi as far back as on October 21, 2010. Coming in the wake of the recent arrest of Prabir Purkayastha, the Editor-in-Chief of NewsClick under an anti-terrorism law and other penal provisions, the revival of a 13-year-old case betrays intolerance and follows a pattern of vendetta against the state's perceived civil society antagonists and outspoken critics. Significantly, the Delhi Police did not think the speeches merited prosecution for sedition at the time, as sought by a complainant before a Magistrate court. However, a Metropolitan Magistrate rejected the police contention and, on November 27, 2010, directed the filing of a first information report (FIR). The police complied with the order, invoking sections of the Indian Penal Code relating to sedition, statements promoting enmity between different groups, imputations against national integration and statements causing public mischief. The FIR also included Section 13 of the Unlawful Activities (Prevention) Act (UAPA) which seeks to punish "unlawful activities".

It is known that the government of the day did not wish to pursue any case against remarks made at the conclave titled 'Azadi: the only way', as it did not want to jeopardise an ongoing effort to find a political solution to the Kashmir issue through three interlocutors. At a time when much has changed in Kashmir since then, including a spell of elected rule and then the abrogation of Jammu and Kashmir's special status and its division into two Union Territories, it makes little sense to criminalise past political speeches now. Mr. Saxena has approved prosecution for the other offences, but not sedition, as there is a Supreme Court of India bar on proceeding with sedition charges. It is not clear whether the police will press the UAPA charge, as Section 45 of the Act requires the sanction of the Central government, and the rules prescribe strict time limits to obtain it. It must be examined if the prosecution is barred by limitation. Under the Code of Criminal Procedure, the limitation for offences that entail prison terms of up to three years is three years. All three sections for which sanction has been granted — Sections 153A, 153B and 505 — attract a three-year jail term. Even though the Code permits the exclusion of the period during which sanction is awaited while computing limitation, it is unlikely that courts will permit such an exclusion if the sanction itself was sought after the limitation period.





## NEWSCLICK NON-CASE

The FIR registered by the Delhi Police against Prabir Purkayastha, the founder of NewsClick, and others is a vague amalgam of sweeping accusations that do not actually disclose any offence, leave alone one of terrorism. Without citing any published content, the FIR alleges offences range from a conspiracy to undermine the country's security to disrupting the 2019 parliamentary polls, from causing disaffection against the government to disrupting essential services. It invokes provisions of the Unlawful Activities (Prevention) Act (UAPA) and penal provisions relating to conspiracy and promoting enmity between different groups. Quite notably, it does not mention any overt act that may be described as unlawful activity or a terrorist act. There is a general description that foreign funds were infused illegally into India by forces inimical to the country with the objective of causing disaffection against the government, disrupting the sovereignty and territorial integrity of India, and threatening its unity and security. It refers to a 'conspiracy' based on purported email exchanges to show Arunachal Pradesh and Kashmir as "not part of India", and also moves to protract the farmers' agitation of 2020-21 and thereby disrupt supply of services and other essential supplies.

Overall, it is quite clear that the police are combining the remittances by American businessman Neville Roy Singham in NewsClick with its journalistic content to build a case that "Chinese" funds are being used for propaganda, fomenting unlawful activities, and undermining the country's security. The UAPA is also conducive to such misuse as its widely defined terms can as easily help criminalise people for 'thought crimes' as for their acts. The resort to UAPA is also a tactical aid to prolong the incarceration of dissenters and the disfavoured, and send out a chilling message to the wider media fraternity. There is also the likely electoral spin-off in its potential for the ruling BJP to milk the 'Chinese conspiracy' theory in the run-up to the Lok Sabha polls. A related question is whether the alleged creation of shell companies by two telecom companies does not merit more than a casual mention in an unrelated FIR and warrant a separate probe into these conduits for funding terror. In mentioning that a lawyer was among those who helped create a legal network for these companies' defence, the police seem to be considering criminalising legal services. The case flags a disturbing trend: the present regime's propensity to misuse anti-terror laws and invoke national security sentiment to undermine individual and media rights.

## LOCAL SENTIMENTS

The National Conference (NC)-Congress alliance has pulled off a thumping victory in the Ladakh Autonomous Hill Development Council-Kargil (LAHDC-K) election, blunting the efforts put in by the Bharatiya Janata Party (BJP) over four years to expand its base in Kargil since it came under the direct rule of the Centre in 2019. This was the first statement made by the Kargil electorate after 2019. Ladakh, comprising Muslim-majority Kargil and Buddhist-majority Leh districts, was granted Union Territory (UT) status, as the Centre decided to end the special constitutional position of the erstwhile State of Jammu and Kashmir (J&K) and split it into two UTs on August 5, 2019. The BJP had won the Ladakh Autonomous Hill Development Council-Leh elections, in 2020. Parties in J&K have called for early elections in the UT too. In Kargil, the NC won 12 seats and the Congress 10, in the 26-member council while the BJP had to be content with two. The election saw a 77.61% turnout, with a significant section of the migrant local population who worked and studied in parts of the country returning to cast their ballot. It is a reflection of how seriously these polls were viewed by the local electorate. Kargil has a total of 74,026 registered voters, spread sparsely in the mountains.





In the last four years, Buddhists and Shia Muslims have jointly protested for special status for Ladakh under the Sixth Schedule of the Constitution to protect land, culture, jobs, languages, and environment. Demands for reunification with J&K or full statehood for Ladakh persist. The BJP had hoped to widen its base in Kargil on the basis of its development initiatives, especially the expansion of road works, new educational institutes and reserving lower-rung jobs only for locals. The NC saw these elections as a referendum on the 2019 reorganisation of J&K. Congress leader Rahul Gandhi, who toured Ladakh on a bike for over a week in August this year, became the first senior leader from the party to throw his weight behind the demands of the Kargil Democratic Alliance (KDA), an amalgam of various socio-political-religious groups, for special constitutional guarantees on land and jobs and a separate Lok Sabha seat for Kargil district. At present, Leh and Kargil together form one Lok Sabha seat. The larger message sent by the voters in Kargil to the BJP is that the final status of Ladakh remains an emotive issue. Also, the development push without special protections and constitutional recognition and an elected Assembly may not assuage the sentiments of locals in the region.

### TRIANGULAR CONTEST

Mizoram, India's second least populated State, where civil society predominates politics like, arguably, no other in the country, is poised to see a three-cornered battle in the Assembly elections scheduled in November. Unlike other States, Mizoram's political contestation is less dependent on money and muscle power, as social service, public standing and the backing of religious and social organisations are key conditions for candidature. The ruling Mizo National Front has to contend not only with its traditional rival, the Indian National Congress, but also the Zoram Peoples' Movement (ZPM), which has presented it a tough challenge this time. It is also facing desertion from its ranks with the Speaker, Lalrinliana Sailo, latching on to the Bharatiya Janata Party. Chief Minister Zoramthanga, a seasoned leader of the formerly insurgent MNF, has played the ethnic card to win support from the Mizo electorate. By championing the cause of the Kuki-Zo people, embroiled in an ethnic conflict in neighbouring Manipur and by ignoring a directive from the Union government to collect biometric data of refugees from Myanmar, citing their ethnic affinity with the Mizo people, Mr. Zoramthanga has tried to steal a march over his opponents. While all parties in Mizoram share the government's and the ruling party's view on this issue, the MNF's vociferous positioning has given it an edge. During the peak of the conflict, civil society organisations managed demonstrations in solidarity with the Kuki-Zo people — an issue that has resonated with the Mizo electorate.

The ZPM, meanwhile, has sought to harp on the MNF's record on development and to leverage on its surprisingly good performance in the Lunglei Municipal Council polls, which indicate its enhanced urban base. In the rural areas, the strongest opposition to the MNF has emerged from the Congress, which is leading an alliance of parties, including the People's Conference and the Zoram Nationalist Party. Inflation has remained a key concern in the State, even relative to the rest of India over the past year, and this could be one of the factors behind voter choice. Despite being a small State — 0.1% of India's population and contributing close to 0.1% of the national GDP — Mizoram is a crucial border State with ample potential for economic growth led by the services and tourism sectors despite being a largely agrarian economy. It has also been regarded as an important gateway in India's 'Act East' strategy, but progress on infrastructure and projects connecting Mizoram to Myanmar and beyond has been limited. The multi-party contest should raise consciousness of matters related to development as much as those related to ethnic solidarity.



## DO DELHI'S MIGRANTS APPROVE THE IDEA OF REMOTE VOTING?

In late 2022, the Election Commission of India (ECI) proposed a Remote EVM (R-EVM) to address issues related to domestic migrant voting. The goal was to improve the 67.4% voter turnout in the 2019 general election. The ECI held an all-party meeting where most political parties raised different kinds of concerns and suggested that there is need for more discussion on this issue.

To gauge public trust in the proposed system, a survey by Lokniti-CSDS was conducted in September 2023, involving 1,017 migrants living in Delhi's slums, with 63% men and 37% women. The survey aimed to understand whether the proposed R-EVM system would gain the viable level of trust among its intended users, setting aside legal and logistical concerns raised by political parties.

The biggest chunk of migrants in Delhi, almost half, come from the neighbouring Uttar Pradesh followed by Bihar (22%), West Bengal (8%) and Rajasthan (7%). The surveyed migrants stated employment opportunities as the primary reason for relocation (58%). However, the second most cited reason was family-related reasons (18%) followed by relocation due to marriage (13%). Of the people who moved for family reasons or due to marriage, an overwhelmingly high proportion were women.

Over three in five (61%) amongst Delhi's migrants have lived in Delhi for more than five years, whereas 9% came to Delhi recently and have lived in Delhi for less than a year. The data also suggest that a majority of migrants from Uttar Pradesh (68%) and Rajasthan (62%) have lived in Delhi for more than five years whereas a higher number of people from Bihar (14%) migrated recently.

Nearly four in five (75%) migrants stated that they have been living in Delhi for a long time; whereas 18% came for a short period. This number suggests that their stay in Delhi is temporary, for work such as construction and other allied activities. When we look at the regional profile of the short-term migrants, one can observe that a comparatively higher proportion of people from Bihar (24%) come to Delhi for short-term work; the other States' percentages being similar. This suggests that people from Bihar are more prone to seasonal migration due to the State's economic activities/opportunities.

Nearly half (53%) the migrants have registered themselves as voters in Delhi while nearly one in four (27%) are registered as voters in their home State. Furthermore, 9% of them are registered voters in both Delhi and their home State. Looking at the electoral participation of Delhi's migrants at different levels of elections — local/panchayat, Assembly, and national elections, one can observe that they participate more in national and State level elections than the local elections.

Migrants from Bihar and Uttar Pradesh maintain strong connections to their local political units, with substantial numbers, 26% and 24% respectively voting in local elections there. In State Assembly elections, a comparatively high number of people from West Bengal (35%) went back to the State to cast their vote. This could be attributed to a sense of responsibility towards their home State's political landscape.

Looking at the reasons people went back to vote, 40% of the people went back home to exercise their fundamental right to vote. This shows a reasonably high level of permeation of ideas of fundamental rights. One in four persons also use election season as another reason to visit their family at home.



The survey's central question revolved around trust in a proposed remote voting system. Overall, 47% of respondents tended to trust this system, while 31% expressed distrust (Table 3). Notably, 23% did not share their opinion, potentially indicating complexities in the proposed system. When analysed by gender, men showed greater trust (50%) compared to women (40%), with more women (32%) responding with 'can't say.'. This is probably down to women's low involvement in politics due to a range of structural reasons.

Trust in the system increased with higher education levels, suggesting that better-educated individuals had more faith in the idea of remote voting. Conversely, lower-educated respondents were more likely to refrain from sharing this opinion. This indicates that people having low educational attainments find it difficult to come to a conclusive opinion about a seemingly complex system.

Examining trust across States, migrants from West Bengal had the highest trust levels at 53%, followed by Uttar Pradesh and Rajasthan at 50% and 49%, respectively. However, in Rajasthan, a significant 39% expressed distrust. Bihar had the lowest trust at 41%, with high 'can't say' responses (26%).

The ECI for the time being has shelved the idea of introducing R-EVMs because most political parties did not support the idea. The ECI wanted to use these machines to make it easier for people to vote. However, just relying on technology will not solve all the problems.

Many people do not understand how these new machines work. Democracy works best when people are actively involved in their local elections, but that is not always happening. Giving people easier ways to vote is good, but it is not enough. Increasing electoral participation alone does not deepen democracy. We need to teach more people about the values of democracy and make sure they understand why it is important.

## FIVE TO GO

There is no established correlation between the outcomes of assembly elections and the vote for the Lok Sabha, even when the former closely precedes the latter. In 2018, for example, the Congress won three of the five states that are set to go to polls in November, but the BJP ended up doing much better in them in the subsequent general election.

Yet, the results of the assembly polls — the electoral calendar for Mizoram, Madhya Pradesh, Rajasthan, Chhattisgarh and Telangana was announced by the Election Commission Monday — will inevitably be parsed for what they say about the prospects of the major players in 2024. They will be read for the indications of which way the political winds might blow nationally.

Significantly, in three of the five states going to the polls, BJP and Congress are in a head-to-head contest. For Congress, which narrowly won MP last time (defections subsequently led to a BJP government), swept Chhattisgarh and had a comfortable win in Rajasthan in 2018, the current campaign will be judged on whether its organisational changes at the top and Rahul Gandhi's attempt at crafting a new political idiom through the Bharat Jodo Yatra translate into electoral success.

After the Karnataka win, it will also be another major test for Mallikarjun Kharge's leadership — his ability to manage differences within the Congress, especially in Rajasthan where CM Ashok Gehlot has been long at loggerheads with Sachin Pilot, will be watched. The party has also doubled down on the neo-Mandal agenda: It has announced a caste census in Rajasthan and promised the



same in MP and Chhattisgarh. It is still an open question whether that politics will have a resonance on the ground with the 60.2 lakh first-time voters in all five states.

The BJP in its current avatar relies overwhelmingly on the PM's popularity to win elections, often at the expense of state-level leadership. This strategy has not always yielded dividends, as in Karnataka earlier this year. In the poll-bound states now, the party is likely to draw attention to the Centre's and PM's successes and policies — G20, women's reservation Bill, increased subsidies on LPG cylinders, etc.

However, the uncertainty about CM candidates may prove to be a hurdle: Vasundhara Raje has looked discontented in Rajasthan and, in MP, Shivraj Singh Chouhan is running a personality-centric campaign but has not been announced as the party's CM face. Most significantly, as the BJP locks horns with the Congress in the context of the comeback of Mandal in a new form, the polls may indicate whether and how much the OBC vote, a sizeable portion of which has been moving to the BJP, can be wooed again by members of INDIA.

#### REPEATED PASSENGER TRAIN CANCELLATIONS EMERGE AS AN ELECTORAL ISSUE IN POLL-BOUND CHHATTISGARH

With less than a month to go until the first phase of voting, the ruling Congress identifies these cancellations – that it alleges are a deliberate move to accommodate the passage of more goods trains carrying coal on the tracks – as a fundamental issue. The party plans to turn up the heat on BJP – which rules the Centre and is the main challenger in the State – over these cancellations.

Congress spokesperson Sushil Anand Shukla says the issue is State-specific as the mineral-rich region is more affected than other issues. He adds how most of these cancellations are continuous and most of these announcements are sudden.

“In the past 20 days, 64 trains have been cancelled and in the past three years, 64,000 trains have been cancelled. On most occasion, not even a proper explanation is given or passengers are told that it's because of track maintenance despite good wagons carrying coal running on the same tracks. We will definitely take these issues to the people in the coming days as it affects the common man,” said Mr. Shukla.

The figure of 64,000 (or 67,000 as the party's official press notes) comes from a Right to Information (RTI) reply filed by Raipur-based RTI activist Kunal Shukla. Mr. Shukla says that the rail stretch from Raipur to Nagpur is crucial as it connects much of Central-Eastern regions of the country to South and North India.

On Tuesday, Mr. Shukla posted another tweet in which he has posted the image of another RTI reply on transport of coal that showed the number of rakes.

Santosh Kumar – spokesperson for the South East Central Zone of Indian railways which is headquartered in Bilaspur – says the figure of 67,000 includes the cancellations during the COVID-19 where transportation of all kinds had come to a halt. The cancellations, he says, are necessitated because of adding infrastructure.

“Cancellations happen from time to time but not on regular basis, we do it on alternate basis. We ensure that if trains are cancelled on a certain route, the weekly ones take priority over the daily ones. And in all case, we ensure that there are at least some alternatives available,” he states.





## THE CASE FOR CASTE CENSUS IN INDIA

### The story so far:

After the publication of a caste survey in Bihar, which found that 63% of Bihar's 13 crore population belong to castes listed under the Extremely Backward Classes (EBC) and Other Backward Classes (OBC) categories, Prime Minister Narendra Modi criticised and rejected the demand for a nationwide caste census made by Congress and several other Opposition parties.

### What do socio-economic data indicate?

The intersection between class and caste-based deprivation in Indian society is evident in a gamut of socio-economic statistics. The average monthly per capita consumption expenditures (MPCE) of Scheduled Tribes (ST), Scheduled Castes (SC) and OBC households in rural areas were, respectively 65%, 73% and 84% of the MPCE of 'Others', i.e. the general category, as per the National Sample Survey (NSS), 2011-12. In urban areas the average MPCE of ST, SC and OBC households were 68%, 63% and 70% of the general category in 2011-12.

The persistence of inequality across caste categories in India can also be seen in the multidimensional poverty estimates based on the National Family Health Survey (NFHS-4/2015-16).

A research paper by scholars from NIT, Rourkela has estimated that while on average 25% of Indians were multidimensionally poor in 2015-16, the poverty ratio among STs was 44.4%, SCs 29.2%, OBCs 24.5% and Others 14.9% [Pradhan I, Kandapan B, Pradhan J. 'Uneven burden of multidimensional poverty in India: A caste based analysis'. PLoS One. 2022 July 29;17(7)]. As per this estimate, while STs, SCs and OBCs taken together comprised around 73% of the Indian population, they accounted for 84% of the country's poor. Over 50% of India's multidimensionally poor belonged to the OBC category.

Estimates by scholars from the Oxford Poverty and Human Development Initiative (OPHI) show that while almost 28% of all Indians were multidimensionally poor in 2015-16, the poverty headcount ratio among STs was 50.6%, SCs 33.3%, OBCs 27.2% and Others 15.6% [Alkire, Sabina and Oldiges, Christian and Kanagaratnam, Usha, Examining multidimensional poverty reduction in India 2005/6-2015/ 16: Insights and oversights of the headcount ratio (February 19, 2021). World Development, Vol. 142, 2021]. As per this estimate, while STs, SCs and OBCs taken together comprised around 77.6% of the Indian population in 2005-06, this share increased to almost 84% of the country's poor in 2015-16.

The multidimensional poverty headcount ratio among Muslims at 31% was also higher than that of Hindus (28%), Christians (16%) and other religious communities (15.7%). The Sachar Committee report (2006) had estimated that 31% of Muslims were 'Below Poverty Line' on the basis of the NSS 61st round, 2004-05, while the poverty headcount ratio among SCs & STs together was 35%, Hindu OBCs 21% and other Hindus (general category) 8.7%. Methodologies of poverty estimation have changed significantly in the past two decades, suggesting a significant decline in the poverty level.

However, the disproportionate concentration of poverty among the STs, SCs, OBCs and Muslims in India have remained stable over time. This clearly indicate that discrimination and exclusion based on caste vis-a-vis STs, SCs and OBCs as well as religion, particularly with regard to Muslims, have a causal relationship with poverty and deprivation.





The Niti Aayog has not published the caste and religion wise data in its publications on national multidimensional poverty index based on NFHS-4/2015-16 and NFHS-5/2019-21.

#### **What about education and employment?**

The pattern of caste-based deprivation can be clearly seen in official data on education and employment indicators. The general category has a much higher proportion of literates, secondary and high school pass outs, graduates and post-graduates than OBCs, SCs and STs.

As per NSS 75th round (2017-18), while only 3% of STs, 4% of SCs and 6% of OBCs are graduates, the proportion of graduates in the general category is over 12%. The proportion of post-graduates within the general category is over 3%, among OBCs around 1% and among SCs and STs, below 1%.

In terms of employment status (PLFS 2021-22), over 30% of the workforce in the general category had a regular job, while the proportion of regular or salaried workers among OBCs and SCs was around 20% and among STs just over 12%. In contrast, almost 29% of STs, 38% of SCs and 20% of OBCs were casual labourers, against only 11.2% of the general category. This indicates that the informal sector is largely populated with STs, SCs and OBCs while the general category has a disproportionately large share of formal employment.

The Central government itself is one of the largest employers in the formal sector, employing over 18.78 lakh persons as on January 2021, as per union government data, 52.7% of whom belonged to the general category. The proportion of employees in the general category is much greater at over 64% in the most qualified and highest paid cohort, i.e. Group A employees. This indicates that the persistence of caste-inequality in educational outcomes is reproducing a similar pattern of caste-inequality in skilled, formal employment, even three decades after the official implementation of the Mandal Commission recommendations. The demand for a nationwide caste census has gathered momentum in this backdrop.

#### **When did caste surveys begin?**

Caste wise enumeration of the population was introduced under the British colonial administration in 1881 and continued till the 1931 census. Independent India's governments abandoned full caste enumeration on the apprehension that it would strengthen caste divisions and perpetuate the caste system.

However, the caste system has persisted and flourished in independent India — even without the caste census — along with its discriminatory and exclusionary consequences, as revealed by official surveys and statistics. The report of the Backward Classes Commission headed by B.P. Mandal submitted to the President of India on December 31, 1980, had the following dictum inscribed at the outset: “There is equality only among equals. To equate unequals is to perpetuate inequality.”

The Mandal Commission report had extrapolated from the caste/community-wise population figures of the 1931 census and estimated the combined population of Hindu and non-Hindu OBCs to be 52% of India's population. The commission had also arrived upon a crucial conclusion, that “caste is also a class of citizens and if the caste as a whole is socially and educationally backward, reservation can be made in favour of such a caste on the ground that it is a socially and educationally backward class of citizens within the meaning of Article 15(4).”



Article 15(4) of the Constitution enables the State to make special provisions for the advancement of “socially and educationally backward classes of citizens.” While the population share of OBCs was estimated at 52%, only 27% reservation for OBCs in all government services, technical and professional institutions was recommended by the Mandal commission, in order to keep the overall reservation for SCs, STs and OBCs together below the 50% ceiling set by the Supreme Court.

#### **What did Indra Sawhney judgement ensure?**

The V.P. Singh government implemented 27% OBC reservation for public services in 1990 and following legal challenges, the Supreme Court upheld it in the Indra Sawhney & others versus Union of India judgment in 1992 with the significant observation: “Identification of a group or collectivity by any criteria other than caste, such as, occupation cum social cum educational cum economic criteria ending in caste may not be invalid.” This cleared the way for OBC reservation in public employment and educational institutions in India.

The demand to resuscitate full caste enumeration in the national census has arisen as a corollary of these historical developments. Numerous government policies, including reservations and other benefit schemes are currently implemented on the basis of the claimed population share of caste groups, even though the actual population size of caste groups in the OBC and general category remain unknown.

#### **Why is there opposition to a caste census?**

Opposition to a nationwide caste census has been aired from some quarters on the ground that the revelation of the exact population share of OBCs greater than or equal to 52%, as estimated by the Mandal commission, would trigger demands for enhancing the 27% reservation quota for OBCs. Such demands, however, were already set into motion following the enactment of the Constitution (103rd Amendment) Act, 2019, which provided 10% reservation to “economically weaker sections” (EWS) within the general category — excluding SC/ST/OBCs — in admission to public and private educational institutions as well as civil posts and services. The law breached the 50% ceiling on reservation and faced legal challenges, but was ultimately upheld by a majority judgment of the Supreme Court in November 2022. The Chief Justice of India also dismissed a review petition against the judgment in May 2023.

With the Supreme Court itself validating reservation quotas beyond the 50% threshold, the demand for expanding OBC reservation beyond the 27% Mandal commission threshold has naturally arisen, because the 27% figure was derived as a residual from the 50% threshold after adjusting the quota for SCs and STs. It never had any basis in population estimates.

#### **What should be the way forward?**

Given the wide divergence of the OBC population thrown up by various official sample surveys ranging from 41% to 46%, between 2015-16 to 2021-22, only a full caste enumeration can help in ascertaining an accurate number. More importantly, ascertaining the numbers and proportions of individual castes within the OBC category have assumed much significance in the light of concerns regarding reservations and other benefits for OBCs getting concentrated among certain dominant caste groups. The Bihar caste survey for instance, shows that 122 small caste groups combined together in the EBC category, accounted for 36% of the state's population, which was the largest share among social categories.



Justice Rohini Commission, which was constituted in 2017 by the Modi government to examine the sub-categorisation of OBCs in the Central list, submitted its report in August 2023. A nationwide socio-economic caste census is necessary to evolve scientific criteria for such sub-categorisation. This would also be necessary for all States, which have their own State-level OBC lists, given the wide variety in caste composition.

#### 59% OF GENERAL CATEGORY STUDENTS AGREE WITH OR NEUTRAL TO CASTEIST REMARKS: IIT-D STUDY

Even as allegations of caste discrimination within premier institutes like the IITs continue to grow, a survey of 545 undergraduate students conducted by the Board of Student Publications (BSP) of IIT Delhi in 2019-20 has revealed that while 75% SC/ST/OBC students were found to be negatively affected by casteist comments, 59% of students from the general category reported that they either agree with or are neutral to casteist remarks.

The survey findings come to light months after the results of a similar survey conducted at IIT Bombay revealed widespread caste discrimination on campus. However, the IIT Delhi survey, for the first time, attempts to record sentiments of general category students on the subject. It showed that half of such respondents admitted to making casteist remarks intentionally or otherwise, while 15% said they had made the remarks intentionally. More insights showed that on an average, 41% of respondents across categories reported casteist remarks being made on campus — intentionally or otherwise, with 11% of students reporting they “know of professors/administrative staff who have made casteist comments”.

#### **In cold storage**

Despite the findings being shared with senior administrative faculty, and discussed at a Student Affairs Council meeting in 2021, the report has since been confined into cold storage. While the BSP was advised against making the findings public and promised action by the Office of Diversity and Inclusion, it is unclear what action the institute has taken since. V. Ramgopal, IIT-D Director from 2016-2022, told The Hindu that his office “was never officially made aware of any such exercise conducted on campus”.

This year, two Dalit students of the Mathematics and Computing Department died by suicide at IIT-D within months of each other. Student organisations on campus sought an investigation into alleged caste discrimination by certain faculty of the departments concerned. In the wake of these suicides, the BSP had last month tried to initiate a survey on caste discrimination, but it was cancelled hours after some students found it “insensitive and irrelevant” and the SC/ST Cell said it was never consulted about it. The SC/ST Cell and the BSP are currently working on initiating another survey on caste discrimination on campus, according to SC/ST Cell member, Associate Professor Yashpal Jogdand.

But more than three years before IIT-Delhi even had an SC/ST Cell, the BSP had managed to complete a similar survey. The survey conducted via Google forms in 2019-20 had captured 15% of the total undergraduate strength of the campus at the time, following which the BSP had prepared a report, which was shared with the Dean (Student Affairs) and the Dean (Student Welfare) by the Board that was elected for the 2020-21 tenure.



Following this, in 2021, the report was officially presented at an online meeting of the Student Affairs Council, the official elected student body, where the students were promised that issues arising out of the findings would be addressed by the Office of Diversity and Inclusion.

“The Deans had said the findings in the report need not be made public because their inputs were not included,” said a source aware of developments at the time. When asked whether the BSP is aware of this report and has acted on it since, the current President of the Board, Professor Gaurav Goel said, “No comment.”

As per the findings in the BSP’s 2019-2020 report, 53% of SC and ST students felt that students intentionally pass casteist comments on campus; this figure was at 30% for OBC and General Category respondents each.

Even among the 11% of all respondents who said they knew professors or administrative staff who had made casteist remarks, the survey showed that 6% of general category respondents had reported this and the figure was at 9% for OBC respondents. It stood at 26% for SC and ST categories, with the report suggesting this may indicate a mismatch between categories on what they think counts as casteist.

#### ‘Acceptable comments’

The survey also found that 33% general category respondents felt that comments such as “He has a CGPA below 5 so he may be from the reserved categories”, “How did he score so well, woh toh reserved category ka hai”, and “Clearing JEE is a cakewalk for people who belong to the reserved categories” were acceptable comments. This was at 9% for SC/ST respondents and 22% for OBC respondents.

Notably, a fourth option asked students whether the statement — “A separate mess should be created for them (students from the reserved categories)” — was casteist. As many as 73% of respondents from across categories acknowledged that it was.

The survey also found that 23% of general category respondents reported that they did not like it when they hear a casteist remark but don’t say anything either. It also showed that two of three general category respondents felt that “students who belong to the reserved classes get undue advantages in IIT-D”.

About 30% of OBC respondents had agreed with this statement, while about 5-10% of SC/ST students had supported it. However, the survey reported that 41% of people who agreed with the statement also reported to “often agree with casteist comments”.

## THE STATE OF INDIA’S SCHEDULED AREAS

### The story so far:

India’s 705 Scheduled Tribe (ST) communities — making up 8.6% of the country’s population — live in 26 States and six Union Territories. Article 244, pertaining to the administration of Scheduled and Tribal Areas, is the single most important constitutional provision for STs. Article 244(1) provides for the application of Fifth Schedule provisions to Scheduled Areas notified in any State other than Assam, Meghalaya, Tripura, and Mizoram. The Sixth Schedule applies to these States as per Article 244(2).

### What are Scheduled Areas?

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





Scheduled Areas cover 11.3% of India's land area, and have been notified in 10 States: Andhra Pradesh, Telangana, Odisha, Jharkhand, Chhattisgarh, Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, and Himachal Pradesh. In 2015, Kerala proposed to notify 2,133 habitations, five gram panchayats, and two wards in five districts as Scheduled Areas; it awaits the Indian government's approval.

However, despite persistent demands by Adivasi organisations, villages have been left out in the 10 States with Scheduled Areas and in other States with ST populations. As a result, 59% of India's STs remain outside the purview of Article 244. They are denied rights under the laws applicable to Scheduled Areas, including the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and the Biological Diversity Act 2002.

In 1995, the Bhuria Committee, constituted to recommend provisions for the extension of panchayat raj to Scheduled Areas, recommended including these villages, but this is yet to be done. The absence of viable ST-majority administrative units has been the standard bureaucratic response — an argument that has also been used to demand the denotification of parts of Scheduled Areas where STs are now a minority due to the influx of non-tribal individuals.

#### **How are Scheduled Areas governed?**

The President of India notifies India's Scheduled Areas. States with Scheduled Areas need to constitute a Tribal Advisory Council with up to 20 ST members. They will advise the Governor on matters referred to them regarding ST welfare. The Governor will then submit a report every year to the President regarding the administration of Scheduled Areas.

The national government can give directions to the State regarding the administration of Scheduled Areas. The Governor can repeal or amend any law enacted by Parliament and the State Legislative Assembly in its application to the Scheduled Area of that State. The Governor can also make regulations for a Scheduled Area, especially to prohibit or restrict the transfer of tribal land by or among members of the STs, and regulate the allotment of land to STs and money-lending to STs. These powerful provisions, authority, and special responsibility vested with Governors, with the President's oversight, have largely remained a dead letter, except briefly in Maharashtra from 2014 to 2020.

It was only when Parliament enacted the provisions in various laws applicable to Scheduled Areas, including the Panchayats (Extension to Scheduled Areas) Act, or PESA, in 1996 that the intent of the Constitution and the Constituent Assembly actually came alive. State panchayat laws had empowered the elected panchayat bodies, rendering the gram sabhas moot. But PESA empowered the gram sabhas to exercise substantial authority through direct democracy, and stated that structures "at the higher level do not assume the powers and authority" of the gram sabha.

#### **Who decides a Scheduled Area?**

The Fifth Schedule confers powers exclusively on the President to declare any area to be a Scheduled Area. In 2006, the Supreme Court held that "the identification of Scheduled Areas is an executive function" and that it doesn't "possess the expertise ... to scrutinise the empirical basis of the same".

In 2016, the Jharkhand High Court dismissed a challenge to the notification of a Scheduled Area because the ST population there was less than 50% in some blocks. The court observed that the declaration of a Scheduled Area is "within the exclusive discretion of the President".





### How are Scheduled Areas identified?

Neither the Constitution nor any law provides any criteria to identify Scheduled Areas. However, based on the 1961 Dhebar Commission Report, the guiding norms for declaring an area as a Scheduled area are — preponderance of tribal population; compactness and reasonable size of the area; a viable administrative entity such as a district, block or taluk; and economic backwardness of the area relative to neighbouring areas.

No law prescribes the minimum percentage of STs in such an area nor a cut-off date for its identification. This said, the 2002 Scheduled Areas and Scheduled Tribes Commission had recommended that “all revenue villages with 40% and more tribal population according to the 1951 Census may be considered as Scheduled Area (sic) on merit”. The Ministry of Tribal Affairs communicated this to the States in 2018 for their consideration, but elicited no response. Compactness of an area means that all the proposed villages need to be contiguous with each other or with an existing Scheduled Area. If not, they will be left out. But contiguity is not a mandatory demarcating criterion. One example is Kerala’s pending proposal, which ignores the conditions.

The Bhuria Committee recognised a face-to-face community, a hamlet or a group of hamlets managing its own affairs to be the basic unit of self-governance in Scheduled Areas. But it also noted that the most resource rich tribal-inhabited areas have been divided up by administrative boundaries, pushing them to the margins. Therefore, determining the unit of the area to be considered — whether a revenue village, panchayat, taluka or district, with an ST-majority population — gave way to arbitrary politico-administrative decisions.

However, PESA’s enactment finally settled this ambiguity in law. The Act defined a ‘village’ as ordinarily consisting of “a habitation or a group of habitations, or a hamlet or a group of hamlets comprising a community and managing its affairs in accordance with traditions and customs”. All those “whose names are included in the electoral rolls” in such a village constituted the gram sabha. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, also known as the FRA Act, adopted this definition. Here, too, the gram sabhas are the statutory authority to govern the forests under their jurisdiction. As a result, the definition of a village expanded beyond the Scheduled Areas to include forest fringes and forest villages as well.

However, gram sabhas are yet to demarcate their traditional or customary boundaries on revenue lands in the absence of a suitable law. FRA 2006 requires them to demarcate ‘community forest resource’, which is the “customary common forest land within the traditional or customary boundaries of the village or seasonal use of landscape in the case of pastoral communities, including reserved forests, protected forests and protected areas such as Sanctuaries and National Parks to which the community had traditional access”. The traditional or customary boundary within revenue and forest lands (where applicable) would constitute the territorial jurisdiction of the village in the Scheduled Area.

### What next?

All habitations or groups of habitations outside Scheduled Areas in all States and Union Territories where STs are the largest social group will need to be notified as Scheduled Areas irrespective of their contiguity. Secondly, the geographical limit of these villages will need to be extended to the ‘community forest resource’ area on forest land under the FRA 2006 where applicable, and to the customary boundary within revenue lands made possible through suitable amendments to the relevant State laws. Finally, the geographical limits of the revenue village, panchayat, taluka, and district will need to be redrawn so that these are fully Scheduled Areas.



## FIRST TEST FLIGHT OF GAGANYAAN MISSION SCHEDULED ON OCT. 21

The Indian Space Research Organisation (ISRO) will execute the first of multiple test flights ahead of the Gaganyaan mission — India's first manned mission to space — on October 21, Jitendra Singh, Minister of State for Space, Science and Technology, said on Tuesday.

The test will be conducted at the Satish Dhawan Space Centre in Sriharikota and is intended to test the 'crew module' or the part of vehicle where the Indian astronauts will be housed.

The test involves launching the module to outer space and bringing it back to earth and recovering it after touchdown in the Bay of Bengal. The Navy personnel have already started mock operations to recover the module, said Mr. Singh. Along with the crew module, there will also be a 'crew escape' system. If the spacecraft while ascending into space faces a problem, this escape system is expected to separate and bring the crew safely back to sea from where they will be picked by the Navy personnel.

In the first of this tests called, Test Vehicle Abort Mission (TV-D1), the module will be identical to the one deployed to space, except that it will be 'unpressurised.'

### Crew Escape Systems

The TV-D1 test vehicle is a single-stage liquid-fuelled rocket developed for this abort mission. "The payloads consist of the Crew Module [CM] and Crew Escape Systems [CES] and will simulate the abort condition during the ascent trajectory corresponding to a Mach number of 1.2 [1 mach is 330 metres per second, or the speed of sound] expected in the Gaganyaan mission. CES with CM will be separated from the Test Vehicle at an altitude of about 17 km. Subsequently, the abort sequence will be executed autonomously commencing with the separation of CES and deployment of the series of parachutes, finally culminating in the safe touchdown of CM in the sea, about 10 km from the coast of Sriharikota," the ISRO said in a statement.

The success of this test will set the stage for the first unmanned "Gaganyaan" mission and ultimately manned mission to outer space in low earth orbit, said Mr. Singh. "Before the ultimate manned "Gaganyaan" mission, there will be a test flight next year, which will carry "Vyommitra", the female robot astronaut," he added.

## INDIA RANKS 111 OUT OF 125 COUNTRIES IN HUNGER INDEX

India ranks 111 out of a total of 125 countries in the Global Hunger Index (GHI) 2023, with its progress against hunger nearly halted since 2015, reflecting a global trend. The Union government, though, contested India's performance for the third year in a row, citing flawed methodology.

Afghanistan, Haiti and 12 sub-Saharan countries performed worse than India on the GHI. India's ranking is based on a GHI score of 28.7 on a 100-point scale, where 0 is the best score (no hunger) and 100 is the worst. This categorises India's severity of hunger as "serious".

The GHI score is based on a formula which combines four indicators that together capture the multi-dimensional nature of hunger, including under-nourishment, child stunting, child wasting, and child mortality.



The Ministry of Women and Child Development yet again questioned the GHI and called it a “flawed measure of hunger that doesn’t reflect India’s true position”.

“The GHI uses the same data sources for all countries to calculate the respective country scores. This ensures that all the rates used have been produced using comparable methodologies,” Miriam Wiemers, senior policy advisor at the GHI, said in an email response.

#### METHODOLOGY OF GLOBAL HUNGER INDEX HAS BEEN RIGHTLY CRITICISED. BUT CONVERSATION MUST GO ON

Almost every year, in October, the publication of the Global Hunger Index (GHI) precipitates an aggressive push-back by the government. This year, too, the report that ranks India 111 among 125 nations — a fall of four places from last year — has elicited an angry reaction from the Union Ministry of Women and Child Development. In what seems a reiteration of its response last year, the ministry has said: “Three of the four indicators used for calculation of the index are related to the health of children and cannot be representative of the entire population. The fourth and most important indicator estimate of the proportion of the undernourished population is based on an opinion poll conducted on a very small sample size of 3,000.” Scholars have also argued that the GHI is a poorly designed measure of hunger. Such criticisms are valid. But they should not divert policymakers’ attention from the persistent problem of poor food intake.

Undernutrition is one of the bleak spots of India’s development story. The National Food Security Act, 2013 made it incumbent on the state to provide basic cereals and grains to ensure that people do not go hungry. Schemes such as Poshan 2.0 seek to address the challenges of malnutrition in children, adolescent girls and pregnant women. However, technical glitches, bureaucratic hurdles, social and economic inequalities and gender discrimination prevent a large number of people from accessing these benefits. Among the troubling statistics of the National Family Health Survey (NFHS) 5 is the one that relates to child nutrition: It found that 89 per cent of children between the formative ages of 6-23 months do not receive a “minimum acceptable diet” — marginally better than the 90.4 per cent recorded in NFHS-4. The survey also flagged high rates of anaemia across large sections — children below six years, adolescent girls and boys and women between 15 to 49 years, including pregnant women.

In recent years, scholars have directed attention to the limitations of calorie intake-centred approaches. They have underlined the importance of addressing vitamin and micro-nutrient deficiency and alerted policymakers to the importance of women’s empowerment. Conversations on nutrition could become richer with more granular data on household consumption. However, the country has not had an official estimate on per capita household spending in more than 10 years. The government junked the Consumer Expenditure Surveys (CES) of 2017-2018 and the results of CES 2022-23 are not yet public. The Centre is right in critiquing the GHI. But that should not diminish the significance of the nutrition challenge. As a first step, it must bolster its information repositories.

#### CONCERNS ABOUT GOVT.’S FACT CHECK UNIT

##### The story so far:

The Bombay High Court on September 29 reserved its verdict in a batch of petitions challenging the constitutionality of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2023 (IT Rules). The Rules permit a Fact Check Unit (FCU) of the

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



Union Government to identify “fake or false or misleading” online content “related to the business of the Central Government” and demand its removal.

#### **What happened?**

In April this year, the Ministry of Electronics and IT (MeitY) promulgated the 2023 IT Rules, which amended the Information Technology Rules, 2021, and allowed the Ministry to appoint a fact checking unit. Subsequently, Kunal Kamra, a political satirist, the Editors Guild of India, and the Association of Indian Magazines filed writ petitions before the Bombay High Court challenging Rule 3(1)(b)(v) of the IT Rules that permit the constitution of a FCU.

The petitioners contend that the provision would enable government-led censorship online and empower the government to be the “prosecutor, the judge, and in that loose sense, the executioner” of what constitutes the ‘truth’ online. Defending the provision, the government has argued that the FCU will only notify intermediaries or online platforms that the content they are hosting is fake, false, or misleading, and that intermediaries can choose to take it down or leave it up with a disclaimer.

A Bench comprising Justices G.S. Patel and Neela Gokhale of the High Court said that it will pass its ruling on the controversial amendment on December 1. The government has apprised the Court that the FCU will not be notified until the judgment is delivered.

#### **What does the amendment say?**

The amendment brings about significant changes to Rule 3(1)(b)(v) of the IT Rules, 2021, which deals with the responsibilities of intermediaries. They are now under an obligation to make “reasonable efforts” to ensure that users do not “host, display, upload, modify, publish, transmit, store, update, or share any information” which is “identified as fake or false or misleading by a fact check unit of the Central government” in respect of “any business of the Central government.” Failure to comply with this puts intermediaries at risk of losing the safe harbour protection provided under Section 79 of the IT Act, 2000. The safe harbour safeguard exempts intermediaries from liability for any third-party information made available or hosted by them.

#### **What did the High Court say?**

Early on in the proceedings, in April, the Bombay High Court observed that the amended Rules no matter how well-intentioned, lack necessary safeguards. The Court expressed the opinion that prima facie, the Rules do not seem to offer protection for fair criticism of the government like parody and satire. Highlighting the ambiguity surrounding the term “any business of the Central government,” the Court wondered if speeches made ahead of the 2024 Lok Sabha elections would fall within its ambit. It then enquired if publications questioning the veracity of such political speeches would be covered by the amendment, thus empowering the government to identify “fake or misleading news” about itself.

Additionally in July, the Court remarked that if the consequences of a law are unconstitutional, it has to be done away with no matter how laudable the motive for its introduction was. The remark was made after Senior Advocate Navroz Seervai argued that the amendment violates Article 14 of the Constitution by discriminating between false news about the government and other false news.

The Court also questioned the sudden need for a FCU, pointing out that the Press Information Bureau (PIB) has been efficiently fact-checking for years. Also, referring to undefined terms in the





Rules such as “fake, false, and misleading,” the Court outlined that what is misleading for one may not necessarily be misleading for another. Underscoring that such terms are subjective and open to various interpretations, the Court remarked, “Those are the only three criteria [to flag content as false]. We don’t know the business of the Central government. The expression like fake is extremely problematic. One might argue something is false. Falsity puts us in a binary, fake doesn’t even attempt to do that. The word ‘misleading’ in the Rules is an extremely problematic area since it is an opinion.”

Addressing editorial content online, Justice Patel enquired, “In newspapers, if you look at criticism of government figures on the state of the economy, figures may come from official sources. Analysts may have their own figures. Is it fake news? What happens to editorial content online? You may find any editorial extremely hard-hitting.”

Observing that the powers bestowed upon the FCU were sort of a ‘diktat’, the Court expressed surprise that there is no provision in the Rules that provides an opportunity for an aggrieved intermediary to justify or defend the flagged content. This violates the principles of natural justice.

Similarly, the Court said that it was troubled by the fact that even the user whose post has been removed or whose account has been suspended by the intermediary after being flagged by the FCU, was left with no recourse or remedy.

#### KEN-BETWA RIVER LINKING: PUSH HELPS CLEAR PROJECT IN TIME FOR POLLS

It took government push over the last few weeks for the Rs 44,605-crore Ken-Betwa Link Project (KBLP) to secure the final forest clearance, six years after it got the provisional nod, and just in time for the upcoming Assembly elections in Madhya Pradesh.

However, the project’s wildlife clearance is under examination at the Supreme Court and it may still require a fresh environmental clearance before work can take off. Two key forest clearance conditions require KBLP to realign its canal and shift the proposed powerhouses from diverted forest land.

Facing strong anti-incumbency in OBC-dominated Bundelkhand, where Congress chief Mallikarjun Kharge kicked off his pre-election campaign this August promising a caste census, the BJP is hoping to cash in on the mega irrigation project, touted to end the water shortage in the drought-prone region.

What makes the party doubly hopeful, say insiders, is that the Congress cannot claim any “legacy credit” as the project is associated with former prime minister A B Vajpayee, who set it rolling in 1999. Underlining that KBLP will irrigate 10.6 lakh hectares of land besides providing drinking water to 62 lakh people in Bundelkhand, Chief Minister Shivraj Singh Chouhan said in a video message on Wednesday: “The Congress did nothing for this region... They only stalled the project.”

In 2011, the UPA-II government had rejected KBLP for its high environmental cost. But it was revived and granted wildlife, environmental and in-principle forest clearances in 2016-2017, under the Modi government. Even as it struggled to meet preconditions for the final forest clearance, the Union Cabinet approved the project in December 2021, with an eight-year deadline.

As recently as July 24, records show, KBLP reiterated its plea for partial exemption from meeting a key condition for the final forest clearance: compensation for the diversion of 60.17 sq km of forest land, by adding an equal extent of revenue or private land to the Panna Tiger Reserve (PTR).



This position has been repeated several times since July 2018, when the Ministry of Jal Shakti told the Environment Ministry that Madhya Pradesh could identify only 42.06 sq km of revenue land, and that it may consider “double of the remaining 18.11 sq km, i.e. 36.22 sq km, of degraded forest land” to meet the 60.17 sq km commitment.

By the end of July, say sources in the Ministry of Jal Shakti and the Madhya Pradesh Forest Department, “a message was conveyed” and a “hard deadline” was set, “given the limited window” available before the state went to polls.

On September 22, noting that “the transfer and mutation of only 3,414.757 ha non-forest land” was done against the requirement of 6017 ha, the Environment Ministry sought clarifications from the state on the remaining 2,792.662 ha.

On September 29, the state Forest Department replied that a “total 6,809 ha non-forest land has been identified” with a “cushion of around 792 ha... for future requirement”. In addition to 3,414.757 ha, it said, 1,486.513 ha of government non-forest land has been allotted and mutated in favour of PTR on September 28.

Further, the Forest Department said, 1,298 ha of private land in the Chhatarpur and Panna districts has been awarded by the Collector, and payment of compensation to the landowners and mutation in favour of PTR was under process. Of the 18 villages where such private land will be acquired, records show, 10 were finalised on September 22.

On October 3, the Environment Ministry issued the final forest clearance. It was a lucky day for Madhya Pradesh and Bundelkhand, said the CM in his video message.

Conceived to divert water from the Ken basin to the Betwa basin for meeting irrigation needs and providing drinking water, KBLP requires a total 60.17 sq km of forest land, including 41.41 sq km of PTR. The total loss of 105 sq km of wildlife habitat to submergence and fragmentation will particularly impact endangered vultures, gharials and tigers.

Incidentally, the Supreme Court is yet to decide on its Central Empowered Committee’s 2019 report that sought thorough studies on the impact of KBLP, saying it “poses a serious challenge” to the very objective of wildlife and forest laws.

But, a state forest official argues, there is no stay order against the project either.

The Madhya Pradesh government is also supposed to carry out a fresh enumeration of trees to be felled for KBLP because the original estimation of 23 lakh trees excluded those with girth between 10 cm and 20 cm, even though most would grow to above 20-cm diameter class by the time they would be felled in seven-eight years. That recount is pending.

## WHAT CAUSED THE FLOOD IN SIKKIM?

### The story so far:

More than 25 people have been confirmed dead, and many more are missing from a massive flood that resulted from a glacier-lake outburst in Sikkim in the early hours of October 4. The voluminous outflow has destroyed the Chungthang dam, which is critical to the Teesta 3 hydropower project, and rendered several hydropower projects along the river dysfunctional.



### **What is a glacier lake outburst?**

Technically called a Glacier Lake Outburst Flood (GLOF), these are instances of large lakes formed from the melting of glaciers, suddenly breaking free of their moraine — natural dams that are formed from rock, sediment and other debris.

The South Lhonak glacier, located in north Sikkim, is reportedly one of the fastest retreating glaciers. The glacier receded nearly two km in 46 years from 1962 to 2008. It further retreated by ~400 m from 2008 to 2019. There are an estimated 7,500 glaciers in the Himalayas and GLOFs have been associated with major disasters through the years.

A report in the journal Nature counts the 1926 Jammu and Kashmir deluge, the 1981 Kinnaur valley floods in Himachal Pradesh and the 2013 Kedarnath outburst in Uttarakhand as examples of GLOF related disasters. Among the Himalayan States in India, Sikkim has about 80 glaciers more than any other State. Over the years climatologists have warned that they could be responsible for lake outbursts.

### **What triggered the Sikkim GLOF event?**

There is uncertainty on this point. Satellite images from the National Remote Sensing Centre, Indian Space Research Organisation suggest around 105 hectares (about 1 square km) of the glacier-fed lake had been drained out. This was on comparing images taken on September 28, when the lake spanned 167 ha and on October 4, the night of the disaster, when it shrunk to 62 ha. On September 17, it was 162 ha. As satellite images don't reveal the depth of the lake, calculating the volume of water in the lake is challenging without physically visiting the place, according to Kalachand Sain, Director, DST-Wadia Institute of Himalayan Geology. However, water-monitoring apparatus maintained by the Central Water Commission (CWC) reports that water levels surged nearly 60 feet above the maximum levels at Sangkalang at 1:30 pm and gushed at nearly 55 kmph. This is, at the very least, thousands of cubic metres of water in a short time and being midnight, gave very little lead time for people downstream to react.

The National Disaster Management Agency reports that "...the primary reason for the sudden surge appears to be a likely combination of excess rainfall and a GLOF event. The lake is at a height of 5,200 metres with a towering ice-capped feature at about 6,800 metres to the north of and in close proximity to the lake." There is speculation that heavy rainfall might have tipped the moraine to collapse and trigger the flood but meteorological records don't reveal any evidence of such heavy rain. "There was heavy rain in south Sikkim but nothing remarkable in the northern region," M. Mohapatra, Director General, India Meteorological Department (IMD) told The Hindu. "But on the other hand, we don't really know. At such a height there is no monitoring of rainfall."

There is also a suggestion that a series of earthquakes in Nepal on October 3, in the afternoon (whose tremors jolted several in the Delhi National Capital Region) might have played a role. "There were two tremors in the afternoon and aftershocks until at about 9 pm on the 3rd. The distance (until Lhonak lake) is about 700 km and so it's theoretically possible that this could be a trigger," said Mr. Sain. "But without a deeper study it is all speculation." The inaccessibility of the terrain makes ground observations that provide conclusive proof difficult, he added.

### **What was the resulting damage?**

The most visible consequence of the flooding was the destruction of the Chungthang dam. Though not a storage dam it directs water to power the Teesta 3 hydropower project. The executive



chairman of Sikkim Urja, which runs the project, is quoted as saying the dam was “washed away in 10 mins.” Senior officials in the CWC say that the dam is significantly damaged and the quantity of silt and water present made it difficult to estimate the extent of damage.

On Thursday, Pankaj Agrawal, Secretary, Ministry of Power, convened an “emergency meeting” to ascertain damage to projects operated by the National Hydropower Corporation (NHPC). All bridges downstream to the Teesta-V hydropower station were submerged or washed out, disrupting communication. “The floodwater overtopped the dam of the Teesta V power station [510 MW]. All connecting roads to the project sites as well as parts of the residential colony have been severely damaged,” the Power Ministry said in a statement, “Presently the power station is shut and not generating any electricity.” The Teesta 3 power project is not operated by the NHPC.

One NHPC employee at the Teesta V power station lost his life. All of the organisation’s other personnel at the site were safe. Works on the under-construction Teesta VI (500 MW) of the NHPC were disrupted with water entering into the powerhouse and transformer cavern. Dams and hydropower projects in downstream West Bengal were not significantly affected but were kept shut from heavy siltation that resulted from the floodwaters.

The State government has set up 26 relief camps in the four affected districts, the Sikkim State Disaster Management Authority (SSDMA) said on Thursday, with at least 1,025 people taking shelter in the eight relief camps in Gangtok district.

The flood destroyed 11 bridges in the State, with eight bridges getting washed away in the Mangan district alone. Two bridges were destroyed in Namchi and one in Gangtok. Water pipelines, sewage lines and 277 houses have been destroyed in the four most affected districts of Mangan, Gangtok, Pakyong and Namchi.

#### **Are such events likely in the future?**

Several studies have over the years warned of the risk from GLOF events from the Himalayas.

“Both the frequency and severity of such events are going to increase exponentially in the future. The Himalayan ecosystem is the most fragile in the world and any disruption in the way we are managing these resources will have a problematic outcome for the people of the region. Rising temperatures are leading to a wetter future and contributing to climate change led extreme events, but it is also disturbing the fragility of the Himalayan ecosystem through hydropower and other dams. GLOF is an outcome of warming of the region and this has been a major risk for the region. Once it is formed, you never know what triggers its outburst. Sikkim is an example of this,” said Anjal Prakash, IPCC author and with the Bharti Institute of Public Policy, Indian School of Business.

While the Teesta river is a source of hydropower generation for several power projects, the risk of GLOF like events requires greater care in planning and executing dam and other infrastructure projects, which account for the huge amount of water that can potentially gush through the mountains.

Early warning systems are implementable, said Dr. Saini but require a coordinated approach such as multiple agencies promptly sharing satellite images (that are trained towards the Himalayas) and a network of sensors to provide adequate warning. “Unlike an earthquake, that is relatively sudden, GLOF events can be anticipated as we can monitor changes in the size of lakes. But this requires greater coordination.”





## DON'T FORCE FEED

There is little fault to be found with the Goa government's desire to preserve and promote the state's cuisine. Goa, whose beautiful beaches, built heritage and relaxed pace of life draw visitors from all over India and the world, also has a rich and varied cuisine that deserves greater attention. Yet, the announcement by Goa's tourism minister Rohan Khaunte, that it is now mandatory for beach shacks to display and serve the state's staple meal of fish curry and rice, brings up a question: Are the menus of these shacks really the government's business?

It is true that Goa's cuisine, drawing as much from the abundance of the seas as the wealth of its land, has long been ignored by visitors. Many native Goan dishes, from the decadent bebinca and dodol to spicy vindalho and xacuti, are deservedly cherished by locals and sought after by discerning foodies from outside. But by and large, the tourists who hop from shack to shack remain ignorant of them or are just plain uninterested.

The mish-mash of sizzler-pasta-fries-dal fry that most shacks serve caters to this crowd. But there is little guarantee that a mandatory fish curry-rice meal on the menus of these shacks — patronised not so much for any scintillating dining experience but for their proximity to the sea — will increase the visibility of the state's cuisine.

Examples from around the world show how this can be done without resorting to fiat — Copenhagen was successfully promoted as the centre of a "new Nordic cuisine" by encouraging restaurants to focus on local ingredients and contemporary renditions of traditional dishes. Peru, with its tourism campaign "Peru Mucho Gusto" (Peru, full of flavour), funded cookbooks and festivals that drew attention to its culinary heritage. Goan food is delicious, but making it mandatory for businesses to serve it will only leave a bad taste in the mouth.

## REMEMBERING KARTHYAYANI AMMA: THE POSTER GIRL OF KERALA'S ADULT LITERACY DRIVE

As any topper will vouch for, in the end, the question paper is always a bit of a letdown. Even the adrenaline rush that comes from knowing that one is going to ace it is no match for the crests and troughs that the process of preparation entails. In 2018, when 96-year-old Karthyayani Amma topped Kerala's Aksharalaksham literacy programme with 98 per cent, her one regret was that the exam had tested only a small part of her preparation. She had been hungry for more.

The poster girl of Kerala's adult literacy programme passed away at her home on Wednesday, at the age of 101 years, but Amma's drive — she had wanted to clear her Class X exams — remains a motivational model of both individual aspiration and institutional support. Statistics show how, despite a surge in literacy among women in India since Independence, the gender gap in education remains large.

The 2011 Census pegs the adult literacy rate for women in rural areas at 50.6 per cent as compared to 76.9 per cent in urban areas, whereas for men, the same in rural areas is pegged at 74.1 per cent as compared to 88.3 per cent in urban areas.

Over the years, one of the highest improvements in literacy rates has been among rural women, achieved in no small measure by the implementation of adult literacy programmes both at the level of the state and the Centre. Kerala, with its high overall literacy level, has been a role model



in this; the New India Literacy Programme, under the National Education Policy 2020, focuses on “education for all”.

It is, however, impossible not to recognise in Karthyayani Amma’s success story the stamp of individual grit. Not having had the opportunity to attend school, literacy had come to her late. But when it did arrive, after the death of her husband and at the behest of one of her daughters, herself a school dropout, she grasped it with both hands and made it count — not just for herself but for many others in need of affirmation that the right to education comes with no constraints.

#### AN INDIAN WAR HERO IN ITALY: THE GLORIOUS STORY OF NAIK YESHWANT GHADGE

Defence Minister Rajnath Singh on Thursday (October 11) paid tributes at the VC Yeshwant Ghadge Sundial Memorial in Montone, Italy.

Singh’s visit to the memorial harkens to a shared military history from World War II — that of the participation of Indian soldiers in the campaign to liberate Italy. However, these soldiers have long been relegated to relative obscurity; it is only earlier this year that Italy opened the memorial in Montone.

##### **Single-handedly captured an enemy post**

Naik Yeshwant Ghadge was not even 23 when he succumbed to German sniper fire in Montone, a commune in the Italian province of Perugia. He had been in service for at least four years at the time, and had been promoted to the rank of Naik, commanding his own rifle section.

On July 10, 1944, a Company of the 5th Mahratta Light Infantry attacked a position that was strongly defended by the enemy. Naik Ghadge’s section came under heavy machine gun fire at close range, in which every soldier except Ghadge himself was killed or wounded.

With literally no one to provide covering fire, Naik Ghadge, without hesitation or fear for his own life, charged to the machine gun post, braving a barrage of bullets. He lobbed a grenade into the post, which knocked out the gun, and emptied the clip of his Tommygun into one crewman. There were two others at the post, and he beat both to death with the butt of his weapon.

All the while, enemy snipers pumped bullets into his back and chest, wounding him mortally. But he breathed his last only after he had captured the post.

For his gallantry, Naik Ghadge was posthumously awarded the Victoria Cross (VC), Britain’s highest military honour. “The courage, determination, and devotion to duty of this Indian NCO in a situation where he knew the odds against him gave him little hope of survival, were outstanding,” the citation reads.

#### GLITTERING SHOW

India’s returns of over a hundred medals from the Hangzhou Asian Games is a watershed moment in its sporting history. The momentous achievement has understandably sent the country into a state of euphoria that has even overshadowed the start of the Men’s Cricket World Cup. The 107 medals India clinched (28 gold, 38 silver and 41 bronze) is its best-ever tally, head and shoulders above the previous high of 70 secured at Jakarta 2018. While a lion’s share of the gold medals came from the three disciplines of track and field (six), shooting (seven) and archery (five), India earning podium finishes across 22 different sports points to the nation’s increasing diversification



of excellence. The rowers, squash players, kabaddi stars and the men's hockey team impressed; there was a first-ever gold medal in equestrian; new heroes were found in roller-skating, wind-surfing, wushu and sepaktakraw. Even cricket, which has long lived an insular life away from multi-disciplinary extravaganzas, joined the party, contributing to India's tally with two golds. This being a visual era, some moments are sure to remain etched in the collective memory, like Parul Chaudhary's stunning heist in the final 50 metres to win the women's 5000m and Kishore Jena leading Olympic and World Champion Neeraj Chopra in men's Javelin before settling for a creditable silver.

However, at continental games, harsh as it may sound, some medals are worth more than others. Sports such as badminton and table tennis see near world-level competition in Asia, which adds a bit more lustre to the medals won. Satwiksairaj Rankireddy and Chirag Shetty's gold in men's doubles badminton, H.S. Prannoy's bronze in men's singles badminton, and Sutirtha and Ayhika Mukherjee's stunning win over the Chinese world champions in Chen Meng and Wang Yidi in women's doubles table tennis to ensure a bronze all fall into this category. Additional perspective can be gleaned from the fact that of the 28 golds, only 12 have come in events that are part of the Olympics roster. Even here, just a handful of marks, like Neeraj's 88.88m throw, are world-beating. This shows that while Indian sport has come a long way, a lot more needs to be done to bridge the gap with global standards. The Union government, Sports Authority of India and various State governments have come up with a plethora of initiatives to help athletes. But they are perennially threatened by inefficient administrators, factionalism in federations, endless court battles and the giant doping cloud that hangs around. For the head to be held high, the body and the legs cannot be allowed to falter.

#### FOR CRICKET IN OLYMPICS, A LOT NEEDS TO FALL IN PLACE

The International Olympic Committee (IOC) could not stay immune to the undying passion for T20 cricket in the subcontinent, and the Los Angeles Games 2028 organisers have swooped in to peck at the financial pie. At the IOC Congress Executive Board meet in Mumbai a day after India and Pakistan play their 50-over league spectacle in the ongoing World Cup, cricket will be put to vote to be included in the Olympic programme. Early indications point to T20 cricket joining the LA Games — fancy stadiums have come up on the LA horizon where Major League Cricket matches took place over the summer. The T20 format can fit into the Olympics' time-brackets, even as the long-winded five-day Tests and day-long 50-over formats stood no chance in the 16-day Olympic programme.

Challenges remain. Not everyone in the IOC is tuned into the quaint bat and ball and field game, and a large part of the world will need to be taught how it's played or watched even. The onus will be on the ICC, subservient to the Indian board, to do the heavy lifting of spreading the sport. The football experiment at the Olympics didn't quite take off in its U23 avatar or ring cash registers for the IOC, despite being the world's most watched sport. Co-opting tennis and golf too didn't attract the best names. India might throw its weight behind the Olympics but the ICC will need to cede ground in the Olympic years.

Perhaps the biggest headache for cricket in the Olympics is how it tends to rush back to the dressing room at the first drop of rain. A farce played out at the Asian Games recently, when higher ranking decided the gold medal on a rain-marred Finals day. Climate change and unseasonal rain mean reserve days will need to be marked out throughout the Olympics. It's all very fine to want a share of the cricket money pie via the Olympics and make India-Pakistan play-act war-war for TV's sake. But it will take immense effort before cricket can be airdropped into the Olympics.

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



## BUSINESS & ECONOMICS

### TIGHTROPE WALK

The decision of the RBI's Monetary Policy Committee (MPC) to leave interest rates unchanged even as the central bank warned of the major risk that 'high inflation' poses to macroeconomic stability is a clear sign that monetary authorities find themselves caught in a cleft stick. After a relatively benign first quarter, when headline retail inflation averaged 4.63% as against the RBI's projection of 4.6%, price gains measured by the Consumer Price Index (CPI) accelerated sharply in the last quarter with July and August seeing readings of 7.44% and 6.83%, respectively. In a tacit acknowledgment of its misjudgment of inflationary trends, the MPC last week raised its projection for average second-quarter inflation by 20 basis points, from the August forecast of 6.2% to 6.4%. And even this projection appears overly optimistic if one considers that the headline number will need to have slowed drastically to less than 5% in September for the RBI's prognosis to be validated. For now, the MPC is hoping that the recent reduction in domestic LPG prices combined with a lowering of vegetable prices would provide some near-term respite to price pressures. Governor Shaktikanta Das underlined the RBI's willingness to resort to Open Market Operation sales of securities to suck out excess funds from the system if it sees reason to believe that liquidity may be rising to a level where it could undermine the overall monetary policy stance.

The RBI's unwillingness to walk the talk and raise interest rates further, even while reiterating the threat to overall economic stability from unmoored inflation expectations, reflects an unstated concern that the growth momentum still remains rather tenuous. The recent debate on the integrity of the NSO's data on economic growth estimates, and concern that the methodology used to posit 7.8% real GDP growth in the first quarter may have given rise to an overestimation, have to be seen in tandem with economic forecasters' increased caution over India's GDP growth outlook for the current fiscal year. Mr. Das acknowledged the weakness in India's goods exports and the uneven monsoon, which has also led to a drop in kharif sowing of crucial oilseeds and pulses, as key risks to the RBI's projection for 6.5% GDP growth in FY24. With the rupee already having weakened by about 0.7% since the last policy meeting in August, the RBI also runs the risk of importing inflation and adding to the external sector vulnerabilities if it fails to raise interest rates.

### FESTIVE CHEER: URBAN CONSUMER CONFIDENCE AT SEVEN-YEAR PEAK

A relatively high share of urban consumers entered the 2023 festival season with more confidence than seven years ago. The conclusion is based on the September 2023 edition of the Reserve Bank of India's Consumer Confidence Survey.

The survey gathers the present views of households in relation to the previous year, focusing on the general economic climate, employment conditions, price trends, and individual income and expenditures across 19 key cities. The most recent iteration of this survey took place from September 2 to 11, 2023, with 6,077 participants; 50.3% of them were female respondents. In September 2023, the start of the festival season in India, 36% of the respondents said the general economic situation had improved compared to a year ago — the highest for any September after 2016. While the confidence in the economy is at a seven-year high, levels of pessimism about the economy are at a six-year low. In September 2023, only 44% said that the economic situation had worsened compared to a year ago — the lowest for any September after 2017. However, those who felt the economy worsened continued to be more than those who felt it has improved.





In September 2023, 34% said their employment opportunities had improved compared to a year ago — the highest for any September after 2018. Pessimism about job opportunities was also low. In September 2023, 44% said their employment levels had worsened compared to a year ago — the lowest for any September after 2017. However, more respondents continued to report that their employment opportunities had worsened than those who said it has improved.

In September 2023, 25% of the respondents said their income levels had improved compared to a year ago — the highest for any September after 2018. Pessimism about income levels was also low. In September 2023, 25% also said their income levels had worsened compared to a year ago — the lowest for any September after 2018.

In September 2023, 91% of the respondents said the price levels of commodities had increased compared to a year ago. For the third consecutive September, the share of such respondents persists above the 90% mark.

In September 2023, 74% said their spending levels had increased compared to a year ago — the highest for any September after 2018. For the second consecutive September, the share of such respondents persists above the 70% mark.

In summary, a higher share of people entered the festival season this year with more confidence about the economy, their job opportunities and income levels than before. A high share of them continue to feel that the price level of commodities is higher than a year ago. A high share of them also spent more this September than in previous years.

According to the RBI's observations, prospects also look bright. "Households remain highly optimistic on future earnings even though their sentiment on current earnings remained around its July 2023 level." The general economic forecast, along with the outlook for employment, income, and spending, is anticipated to be better. Additionally, the Future Expectations Index (FEI) hit its highest level in four years in the most recent survey, the RBI observed.

### FOOD INFLATION ISN'T ACROSS-THE-BOARD. IT CALLS FOR A MORE NUANCED APPROACH

Consumer price inflation has fallen from 7.4 per cent to 5 per cent year-on-year between July and September, below the Reserve Bank of India's 6 per cent upper tolerance limit. It has come on the back of retail food inflation registering an even sharper decline, from 11.5 per cent to 6.6 per cent, during this period. Much of the food inflation is at present concentrated in cereals (10.9 per cent) and pulses (16.4 per cent), while the price increases in vegetables and milk — items that were a source of angst until recently — have considerably moderated.

There's no better indicator of relief on the vegetable prices front than tomatoes, whose annual inflation has collapsed from a mind-boggling 202.1 per cent in July to minus 21.5 per cent in September. Edible oil inflation has been in negative or low single-digits for over a year. Inflation has been high for salt and spices, but sufficiently under control in sugar.

The long and short of it is that food inflation is no longer generalised. While it's early to say that the worst is over, El Niño's impact hasn't been as bad as was feared. There was definitely a lot to worry about when India recorded the driest and also the hottest August this time. Thankfully, rainfall was 13.2 per cent surplus in September.

Apart from providing life-saving showers for the standing kharif crop, it has pared the overall water level deficit in major reservoirs (relative to the 10-year-average) to 5.6 per cent, from 13.8



per cent on September 6. Reasonably filled-up dam reservoirs and recharged groundwater tables should enable plantings for the coming rabi season, the prospects for which seemed dire till the monsoon staged a timely recovery in September. This should, for now, keep a lid on food prices in general. Food inflation is, if at all, limited to “dal-roti” — unlike when its effects extended even to sabzi and doodh.

If food inflation isn't across-the-board, it calls for a more nuanced approach from the government that balances both consumer and producer interests. Currently, it has chosen a sledgehammer strategy to keep prices low at all costs — through export bans/restrictions (on wheat, sugar, onion and most rice) and stocking limits (pulses and wheat). Privileging consumers over producers may be politically expedient too, as the former generally outnumber the latter.

But that strategy can backfire where farm votes matter: Soyabean trading below minimum support price, amid all-time-high vegetable oil imports, could well be an issue in next month's Madhya Pradesh and Rajasthan polls. The government also needs to take a view beyond elections: Are excessively pro-consumer policies conducive for investments in a sector with the highest employment potential, both on- and off-farm.

## SPRING CLEANING

The Goods and Services Tax (GST) Council last Saturday lifted the haze on about a dozen tax treatment ambiguities, some of which have lingered since the indirect tax regime's launch in July 2017, such as the tax on corporate and personal guarantees for bank loans. It slashed the GST on molasses from 28% to 5%, with a view to lower cattle feed costs and ease up cash flows for sugar mills so they may pay farmers' dues faster. Rate tweaks and spring-cleaning clarifications apart, one of the significant outcomes was the decision not to exercise the Council's power to tax extra neutral alcohol (ENA) used for alcoholic liquor. With alcohol for human consumption still outside the GST net, the indirect tax levy on ENA or high strength potable alcohol — a key ingredient — could not be set off against State levies on the final product. Industry had been seeking for clarity on this vexed issue for years, with courts taking varying positions.

It is heartening that the Council, that met just twice in 2022, has met four times this year, and thrice in just four months, even if a few agenda items pertained to fixing anomalies in recent decisions. With the age norms for the president and members of the long-awaited GST Appellate Tribunals now harmonised with other tribunals — a clearly avoidable oversight — one hopes they will become operational soon. For consumers and producers, however, the biggest matter of concern should be the Council's resolve to meet at a future date exclusively to discuss what Finance Minister Nirmala Sitharaman termed 'perspective planning' on the GST Compensation Cess and what kind of surcharge it could be replaced with. Originally packaged as a time-bound levy on top of a 'Good and Simple Tax' to compensate States for revenue losses for the first five years of GST, the COVID-19 pandemic's hit on tax collections had triggered an extension of the Cess levied on so-called demerit goods such as aerated drinks, tobacco products and automobiles, till March 2026. Discouraging some sin goods may be desirable. However, ringing in a new cess must not be done in isolation, but as a part of the broader rationalisation of GST's complex multiple-rate structure. That rationalisation exercise, initiated two years ago, unfortunately remains off the table despite robust revenue inflows in recent times. Frequent tweaks of irritants aside, the GST regime needs a holistic reform plan, including a road map to bring in excluded items such as electricity, petroleum and alcohol.



## WHY THE RBI'S OPEN MARKET OPERATION PLAN CAUGHT THE MARKET BY SURPRISE

The Reserve Bank of India's announcement on Friday (October 6) to consider the Open Market Operation (OMO) sale of government securities to manage liquidity in the system took the bond market by surprise as the central bank did not reveal any specific timeline for the proposal. In response, the yield on the benchmark 10-year government bonds shot up by 12 basis points to 7.34 per cent as the market anticipates an OMO shortly, which is expected to tighten liquidity in the system.

### Why did it surprise the markets?

While there is no explicit calendar for this, a long sword hangs now that such OMOs can be announced any day. "This is especially so since the market understands that the best of liquidity is likely over the October-December quarter. Core liquidity may shrink enough by then for the RBI to not want to persist with OMOs from the next quarter. Thus, the risk of this additional supply is more near term, and this may weigh more on the minds of market participants," said Suyash Choudhary, Head – Fixed Income, Bandhan AMC.

Though the retail inflation was at 6.83 per cent in August, the market was not expecting this measure from the RBI to suck out excess liquidity, adding a hawkish tint to the monetary policy. Liquidity is expected to tighten due to cash withdrawal from the banking system due to the forthcoming festival season. "Going forward, while remaining nimble, we may have to consider OMO sales to manage liquidity, consistent with the stance of monetary policy. The timing and quantum of such operations will depend on the evolving liquidity conditions," RBI Governor Shaktikanta Das said while unveiling the monetary policy.

### What's OMO?

The RBI uses Open market operations (OMOs) in order to adjust the rupee liquidity conditions in the market on a durable basis. When the Reserve Bank feels that there is excess liquidity in the market, it resorts to the sale of government securities, thereby sucking out the rupee liquidity. Similarly, when the liquidity conditions are tight, the central bank buys securities from the market, thereby releasing liquidity into the market. It's used as a tool to rein in inflation and money supply in the system. However, when liquidity is sucked out, it can lead to a spike in bond yields as the RBI will release more government securities into the market and bond buyers demand more interest rate on these securities.

### Why RBI wants OMO?

While the specific OMO calendar has not been released, the RBI governor, in the post-policy press conference, emphasized the bank's intent for "active liquidity management." This signals the RBI's inclination towards tighter liquidity conditions in the future, influenced by both inflation risks and financial stability concerns. This stance is in alignment with the central bank's objective of anchoring inflation at 4 per cent. The RBI's approach is clear: merely keeping inflation below the upper band of the target range (at 6 per cent) is insufficient, a more proactive approach is essential, according to Amnish Aggarwal, head of research at Prabhudas Lilladher Pvt Ltd.

The central bank wants to use liquidity management to achieve the target. Historically, the October-May period is observed to have high cash withdrawals due to the festive and wedding seasons. This generally tends to reduce the durable liquidity in the banking system, which now appears to be the RBI's area of focus under liquidity management. Thus, the mention of OMO sale



at this stage was a bit of a surprise and it leaves the window open for speculations regarding the level of liquidity at which the RBI may plan out the OMO sale and its quantum, said Pankaj Pathak, Fund Manager- Fixed Income, Quantum AMC.

#### **What's the liquidity position now?**

The RBI governor hinted that the RBI could opt for an OMO sales auction of government securities to mop up any build-up of excess liquidity. The RBI has been conducting OMO sales in the secondary market over the past month, with net sales amounting to Rs 6,200 crore in September.

The RBI had implemented an incremental cash reserve ratio (I-CRR) in the August MPC meeting, resulting in the withdrawal of liquidity amounting to Rs 1.1 lakh crore from the banking system. Despite the gradual withdrawal of the I-CRR, systemic liquidity continued to stay in the deficit since mid-September due to quarterly tax outflows and GST payments. The advance tax payments have resulted in a rise in the government's cash balance with the RBI, which is estimated at around Rs 2.7 lakh crore. A pickup in government spending in the second half and the withdrawal of I-CRR can increase systemic liquidity. However, a pickup in currency demand ahead of the festive season can counteract any increase in systemic liquidity, according to Care Ratings.

#### **LABOUR FORCE PARTICIPATION IS UP, UNEMPLOYMENT IS DOWN. WHAT ABOUT THE QUALITY OF WORK?**

The issue of jobs has been at the heart of economic policy discussion, especially in recent decades when the link between economic growth and employment generation has been seen to be rather tenuous. The pandemic has been a major trigger of economic disruption, causing widespread financial distress, touching off a surge in unemployment and leading to mass migration back to villages. Seen against this backdrop, the latest periodic labour force survey for 2022-23 throws up several interesting trends. As per the survey, the labour force participation rate has continued to rise across the country. Alongside, the unemployment rate has continued to decline. This should, on the face of it, be indicative of an improvement in the labour market. However, the survey also documents a decline in the share of regular wage/salaried employment and a rise in self-employment. These trends require closer examination.

At the all-India level, the labour force participation rate (15 years and above) has increased from 49.8 per cent in 2017-18 to 57.9 per cent in 2022-23. While participation rates have increased in both rural and urban areas, the rise is to a much greater extent in the former. Much of this increase has been driven by females, whose participation rate in rural areas has risen from 24.6 per cent in 2017-18 to 41.5 per cent in 2022-23 — an increase of roughly 17 percentage points over this period. While this should be encouraging, considering the low levels of female participation in the country, some have suggested that this rise in participation is indicative of the economic distress in rural areas, which is pushing women to work in order to augment their family incomes. After all, work under MGNREGA, where wages are lower than in other non-farm occupations, has seen a steady uptick over the years (even excluding the pandemic years of 2020-21 and 2021-22), and women person days under the programme have also been steadily rising.

Alongside this increase in labour force participation rates, the share of the self-employed has risen from 55.6 per cent in 2020-21 to 57.3 per cent in 2022-23, while the share of regular wage/salaried employed has fallen from 21.1 per cent to 20.9 per cent. The percentage of workers engaged in informal sector enterprises in the non-agricultural sector has also gone up from 71.4 per cent in 2020-21 to 74.3 per cent in 2022-23. While unemployment rates have declined across





board, and among the youth (those in the age group of 15-29 years), this falling share of regular wage/salaried and rise in self-employment reinforces concerns that the economy is unable to generate sufficient productive and remunerative forms of employment to absorb the millions entering the labour force each year. Inadequate job creation was, and still remains, the biggest challenge confronting policymakers.

#### MESSAGE FROM MOODY'S: GOVERNMENT MUST HANDHOLD SEMI-CONDUCTOR INDUSTRY

In December 2021, the Centre launched the Semicon India Programme with an outlay of Rs 76,000 crore for the development of a semiconductor manufacturing ecosystem in India. The scheme was modified a year later to increase incentives to the industry. Experts have rightly pointed out that the government's plan to make India a semi-conductor hub would require not just financial backing but also investments in talent development. Now a report by the global rating firm, Moody's, has underlined another challenge. Climate change can damage manufacturing facilities, disrupt supply chains and lead to significant financial losses. The report warns that risks posed by global warming could deter investments in the industry and come in the way of India realising its ambition of becoming a chip-making hub. India is not the only country that faces such a challenge. Taiwan, the current leader in semi-conductor manufacturing, is also threatened by erratic weather patterns.

Today, silicon chips have become as essential as oil reserves. They enable advances in computation and are embedded in smartphones and defence equipment. They are also integral to clean energy appliances and machines such as electric vehicles, solar arrays and wind turbines. Here lies a paradox. The industry's environmental footprint is large. Chip fabrication plants — fabs — consume large amounts of water and generate hazardous waste. The sector is amongst the top GHG emitters today. In face of pressure from investors, however, a section of the industry is taking steps to clean up its act. Two years ago, the world's largest chip maker, Taiwan's Semiconductor Manufacturing Company, which supplies to Apple, amongst others, pledged to reach net zero emissions by 2050.

Samsung, Intel and several companies in Europe have reportedly started conducting GHG audits. India's fledgling semi-conductor sector could find itself challenged by these outfits. At the same time, units in India have the advantage of starting from a relatively clean slate. They can learn from the experience of companies in other parts of the world and incorporate global best practices at the outset.

Moody's echoes IPCC reports in saying that costs related to flooding, water stress and sea-level could escalate significantly by 2050. India's Semicon programme does have the advantage of being concentrated in greenfield centres that do not have the crippling legacy of poorly planned drainage systems. Planned as a part of the government's Smart City Programme, these townships should find ways to prevent disruption during extreme rainfall events. The government has been positioning Dholera in Ahmedabad as a chip-making hub. It should be alert to heat-related stresses in the region that, by all accounts, are likely to be aggravated because of climate change. The message from the Moody's report is clear: Government will have to handhold industry, invest in climate-resilient infrastructure and nudge fab units to adopt sustainable practices.



## IN LAW CHANGE: A PUSH FOR ELECTRIC VEHICLES, LESS DEPENDENCE ON BATTERY IMPORTS

The Centre has amended a key law so that it can specify competitive royalty rates for the mining of three strategically significant minerals — lithium, niobium, and rare earth elements (REEs). The decision comes after the government removed six minerals, including lithium and niobium, from the list of 'specified' atomic minerals, which could set the stage for private sector participation through auctioning of concessions for these minerals.

These changes to the rules build on an earlier move to ease the issuing of mining leases and composite licences for 24 critical and strategic minerals, which are vital in key supply chains that include electric vehicle batteries, energy storage devices, and high-end motors.

### **First of all, what are these minerals?**

\* Lithium is a soft, silvery-white alkali metal, which is a vital ingredient of rechargeable lithium-ion batteries that power electric vehicles, laptops, and mobile phones. In February, 'inferred' lithium resources of 5.9 million tonnes were established in Jammu and Kashmir, the largest deposit in India.

\* Niobium is a light grey, crystalline metal with a layer of oxide on its surface, which makes it resistant to corrosion. It is used in alloys, including stainless steel, to improve their strength, particularly at low temperatures.

Alloys containing niobium are used in jet engines, beams and girders for buildings, and oil and gas pipelines. Given its superconducting properties, it is also used in magnets for particle accelerators and MRI scanners.

The main source of this element is the mineral columbite, which is found in countries such as Canada, Brazil, Australia, and Nigeria.

\* REEs or rare earths are a group of 17 very similar lustrous silvery-white soft heavy metals. Rare earth compounds are used in electrical and electronic components, lasers, and magnetic materials.

### **What has the government done, and how does it matter?**

The government has specified new royalty rates by amending the Second Schedule of the Mines and Minerals (Development and Regulation) Act, 1957. Currently, Item No. 55 of The Second Schedule of the MMDR Act, 1957, specifies a royalty rate of 12% of the average sale price (ASP) for minerals that are not specifically listed in that Schedule. This rate is much higher than global benchmarks.

The lowering of the royalty rates effectively aligns India's royalty rates with global benchmarks, and paves the way for commercial exploitation of these minerals through auctions, which can be conducted by the Centre or states. A competitive royalty rate ensures that bidders would be attracted to the auctions.

### **So what are the lower royalty rates?**

After the Cabinet's decision on Wednesday, lithium mining will attract a royalty of 3% based on the London Metal Exchange price. Niobium too, will be subject to 3% royalty calculated on the



ASP, in case of both primary and secondary sources. REEs will have a royalty of 1% based on the ASP of the Rare Earth Oxide (the ore in which the REE is most commonly found).

The Ministry of Mines has laid down the way to calculate the ASP of these minerals, on the basis of which the bid parameters will be determined.

**And how is this going to help?**

The idea is to encourage domestic mining, so that imports of these minerals can be lowered, and related end-use industries such as electric vehicles (EVs) and energy storage solutions can be set up. These critical minerals are seen as an important prerequisite for India to meet its commitment to energy transition, and to achieve net-zero emissions by 2070.

**LITHIUM:** India currently imports all the lithium it needs. The domestic exploration push goes beyond the J&K exploration, and includes exploratory work to extract lithium from the brine pools of Rajasthan and Gujarat, and the mica belts of Odisha and Chhattisgarh.

India is a late mover in attempts to enter the lithium value chain. This is a time when EVs are seen as a sector ripe for disruption — the next couple of years are widely expected to be an inflection point for battery tech, with several potential improvements to Li-ion technology.

More than 165 crore lithium batteries are estimated to have been imported into India between FY17 and FY20 for an estimated \$3.3 billion. China is a major source of lithium-ion energy storage products that are imported into India.

**REEs:** The rare earths constitute another hurdle in the EV supply chain. Much of the worldwide production is either sourced from or processed in China, and it can be difficult to secure supplies.

In an EV, the rare earth elements are used in the motors and not the batteries. A permanent magnet motor uses magnets embedded in or attached to the surface of the motor's rotor — these magnets are used to generate a constant motor flux, instead of requiring the stator field to generate one by linking to the rotor. The magnets used in these motors are made with REEs such as neodymium, terbium, and dysprosium.

But rare earths are typically mined by digging vast open pits, which can contaminate the environment and disrupt ecosystems. When poorly regulated, mining can produce waste-water ponds filled with acids, heavy metals, and radioactive material that might seep into groundwater.



## LIFE & SCIENCE

### SCIENTISTS UNTANGLE MYSTERY OF THE EARLIEST GALAXIES

Since beginning operations last year, the James Webb Space Telescope has provided an astonishing glimpse of the early history of our universe, spotting a collection of galaxies dating to the enigmatic epoch called cosmic dawn.

But the existence of what appear to be massive and mature galaxies during the universe's infancy defied expectations - too big and too soon. That left scientists scrambling for an explanation while questioning the basic tenets of cosmology, the science of the origin and development of the universe. A new study may resolve the mystery without ripping up the textbooks.

The researchers used computer simulations to model how the earliest galaxies evolved, concluding that star formation may have unfolded differently in these galaxies in the first few hundred million years after the Big Bang event 13.8 billion years ago than it does in large galaxies populating the cosmos today.

Star formation in the early galaxies occurred in occasional big bursts, they found, rather than at a steady pace. So these galaxies may have been relatively small, as expected, but might glow just as brightly as genuinely massive galaxies do, giving a deceptive impression of great mass.

### SIGNIFICANCE OF QUANTUM DOTS IN NANOTECHNOLOGY

#### The story so far:

Alexei I. Ekimov, Louis E. Brus, and Moungi G. Bawendi have been awarded the 2023 Nobel Prize for chemistry "for the discovery and synthesis of quantum dots".

#### What is a quantum dot?

A quantum dot is a really small assembly of atoms (just a few thousand) around a few nanometres wide. The 'quantum' in its name comes from the fact that the electrons in these atoms have very little space to move around, so the crystal as a whole displays the quirky effects of quantum mechanics — effects that otherwise would be hard to 'see' without more sophisticated instruments. Quantum dots have also been called 'artificial atoms' because the dot as a whole behaves like an atom in some circumstances.

#### Why are they of interest?

There are two broad types of materials: atomic and bulk. Atomic of course refers to individual atoms and their specific properties. Bulk refers to large assemblies of atoms and molecules. Quantum dots lie somewhere in between and behave in ways that neither atoms nor bulk materials do. One particular behaviour distinguishes them: the properties of a quantum dot change based on how big it is. Just by tweaking its size, scientists can change, say, the quantum dot's melting point or how readily it participates in a chemical reaction.

When light is shined on a quantum dot, it absorbs and then re-emits it at a different frequency. Smaller dots emit bluer light and larger dots, redder light. This happens because light shone on the dot energises some electrons to jump from one energy level to a higher one, before jumping back down and releasing the energy at a different frequency. So, quantum dots can be easily





adapted for a variety of applications including surgical oncology, advanced electronics, and quantum computing.

#### **What did the Nobel laureates do?**

For centuries, people have been creating coloured glass by tinting it with a small amount of some compound. How much of the compound, or dopant, is added and how the glass is prepared changed which colour the glass finally had. By the late 1970s, scientists had developed techniques to deposit very thin films on other surfaces and observe quantum effects in the films. But they didn't have a material per se — an object wholly reigned by quantum effects. In the early 1980s, Alexei Ekimov, from the erstwhile Soviet Union, and his colleagues changed this. They added different amounts of copper chloride to a glass before heating it to different temperatures for different durations, tracking the dopants' structure and properties. They found that the glass's colour changed depending on the size of the copper chloride nanocrystals (which depended on the preparation process) — a telltale sign that the crystals were quantum dots. In 1983, a group led by Louis Brus in the U.S. succeeded in making quantum dots in a liquid — rather than trapped within glass, as in Dr. Ekimov's work. Both Dr. Brus and Dr. Ekimov further studied quantum dots, working out a mathematical description of their behaviour and how it related to their structure. But both of them lacked one thing: a simple way to make quantum dots with just the right properties.

A team led by Mounqi Bawendi at the Massachusetts Institute of Technology achieved this in 1993, with the hot-injection method. A reagent is injected into a carefully chosen solvent (with a high boiling point) until it is saturated, and heated until the growth temperature, that is, when the reagent's atoms clump together to form nanocrystals in the solution. Larger crystals form if the solution is heated for longer. Their birth within a liquid makes their surfaces smooth. Finally, crystals of the desired size can simply be filtered out. This method accelerated the adoption of quantum dots in a variety of technologies.

#### **What are quantum dots' applications?**

An array of quantum dots can be a TV screen by receiving electric signals and emitting light of different colours. Scientists can control the path of a chemical reaction by placing some quantum dots in the mix and making them release electrons by shining light on them. If one of the energy levels an electron jumps between in a quantum-dot atom is the conduction band, the dot can operate like a semiconductor. Also, solar cells made with quantum dots are expected to have a thermodynamic efficiency as high as 66%. A quantum dot can also highlight a tumour that a surgeon needs to remove, hasten chemical reactions that extract hydrogen from water, and as a multiplexer in telecommunications.

### NEW TOOLS TO FATHOM THE WORLD OF ELECTRONS

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

On October 3, the 2023 Nobel Prize for physics was awarded to Anne L'Huillier, Pierre Agostini, and Ferenc Krausz “for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter”.



### **What is an attosecond?**

An attosecond is one quintillionth of a second, or  $10^{-18}$  seconds. This is the timescale at which the properties of an electron change. So, to truly understand electrons, it should be possible to study them at these timescales. This is what the work of the Nobel laureates made possible.

### **What is attosecond science?**

Attosecond science, including attosecond physics, or attophysics, deals with the production of extremely short light pulses and using them to study superfast processes. A hummingbird's wings beat 80 times a second, so a single beat would last  $1/80$ th of a second. At its best, the human eye can see up to 60 frames per second, which is not good enough to see a single wingbeat as it happens. Instead, the wings' motion would appear as a blur.

One solution is to use a digital camera that creates photographs by capturing light coming from a source using a sensor. To capture a single wingbeat, the camera needs to capture only just as much light — which it can do if its aperture is open for exactly  $1/80$ th of a second. An alternative is to keep the aperture open at all times and release a light pulse whose duration is  $1/80$ th of a second towards the wing and capture the reflection. The former is much easier to do with a digital camera, but when you're studying electrons, the latter is a better option. In attosecond science, the light pulse's duration is a few hundred attoseconds because the electrons' 'wingbeats' happen that rapidly.

### **What is the physics of producing an attosecond pulse?**

The concepts underlying the production of attosecond pulses come from wave mechanics. In 1988, Anne L'Huillier and her colleagues in Paris passed a beam of infrared light through a noble gas. They found that the gas emitted light whose frequency was a high multiple of the beam's frequency — for example, if the beam frequency was 10 arbitrary units, the emitted light had frequencies of 50 units, 60 units, 70 units, etc. This phenomenon is called high-harmonic generation, and the emitted waves are said to be overtones of the original. The researchers also found that as they increased the frequency of the original beam, the intensity of the emitted light dropped sharply, then stayed constant for a range, and then dropped again.

By 1994, researchers had worked out why passing the infrared beam through the noble gas was having these effects. A beam of light consists of oscillating electric and magnetic fields. 'Oscillating' means that at a given point, the field's strength alternately increases and decreases. So an electron at this point would be imparted some energy and then have it taken away; when energy is imparted, the electron would come loose from an atom, and when it is taken away, the electron and the atom would recombine, releasing some excess energy. This energy is the light re-emitted by the gas.

The researchers also found a way to describe this process using the equations of quantum mechanics. These equations also explained why the intensity of the re-emitted light plateaued as the beam frequency was increased.

### **How is an attosecond pulse produced?**

When the infrared beam strikes the noble gas atoms, it produces multiple overtones. If the peak of one overtone merges with the peak of another, they undergo constructive interference (like in the double-slit experiment) and produce a larger peak. When the peak of one overtone merges



with the trough of another, however, they undergo destructive interference, ‘cancelling’ themselves out.

By combining a large number of overtones in this way, physicists could fine-tune a setup to produce light pulses for a few hundred attoseconds — due to constructive interference — and then stop, due to destructive interference. These pulses are produced only when the beam’s frequency is within the plateau range.

#### **How do we know a pulse lasts for an attosecond?**

A major technique to measure the duration of a short light pulse is called RABBIT — and Pierre Agostini and his colleagues at a facility in Paris developed it in 1994. Here, the attosecond pulse and another pulse of a longer duration are shined on atoms of a noble gas. Due to the photoelectric effect, the photons in the two pulses kick out electrons from the atoms. Physicists harvest data about these electrons and the atoms. Information about the pulse’s properties — including its duration — can be mathematically extracted by analysing this data. The principles of producing and then measuring attosecond pulses were finally in place.

It was only in 2001 that Agostini et al., in Paris, and Ferenc Krausz et al. in Vienna were able to produce verified attosecond pulses in a ‘train’: a pulse followed by a gap, followed by a pulse, and so forth. The pulse duration in the former case was 250 as. In the latter, the Krausz group produced a pulse train with a pulse duration of 650 as, and using a filtering technique was also able to isolate a single pulse, a bullet of light. After this, all three groups, and other physicists, kept refining these techniques so that, by 2017, experts were able to produce a pulse as short as 43 attoseconds.

#### **What are the applications of attophysics?**

The devices used to produce attosecond pulses cost crores of rupees, great skill to operate, and are bulky. But miniaturisation has been an important form of technological progress in the last century and, someday, we may have pocket-sized gizmos to study electrons. The important thing is we know how to achieve it. Science has had its own variety of miniaturisation — microbiology, femtochemistry, attophysics — facilitated by devices that could see smaller and smaller things.

Microbiology alerted us to bacteria and femtochemistry allowed us to finely manipulate chemical reactions. In 2010, a team led by Dr. Krausz used attophysics to find that electrons leaving two slightly different energy levels in a neon atom, due to the photoelectric effect, don’t do so simultaneously, as was once thought. Instead, there is a 21-attosecond delay. The photoelectric effect is at the heart of solar power, and by refining our theoretical understanding of it based on studies like this, we could gain big. This motif extends to most parts of physics, chemistry, and biology — everywhere the properties of electrons matter.

### THE IMPACT OF CLAUDIA GOLDIN’S WORK

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

On Monday, the Royal Swedish Academy of Sciences announced that the Sveriges Riksbank Prize in Economic Sciences for 2023 was being awarded to Harvard University Professor Claudia Goldin for “having advanced our understanding of women’s labour market outcomes”. Her work, it said, is the “first comprehensive account of women’s earning and labour market participation through the centuries”. Professor Claudia Goldin is only the third woman to have won the prize (for Economics) and the first to do it solo.



### **What is her research about?**

Professor Goldin trawled through the archives of about 200 years of the United States to demonstrate how and why gender differences in earnings and employment rates have changed over time. The most significant of her observations was that female participation in the labour market did not exhibit an upward trend over the entire period, but rather a U-shaped curve. In other words, economic growth ensuing in varied periods did not translate to reducing gender differences in the labour market. She demonstrated that several factors have historically influenced and still influence the supply and demand for female labour. These include opportunities for combining paid work and a family, decisions (and expectations) related to pursuing education and raising children, technical innovations, laws and norms, and the structural transformation in an economy.

According to her, the most important in the unequal paradigm “is that both lose”. She told Social Science Bites blog earlier in December, “Men are able to have the family and step up because women step back in terms of their jobs, but both are deprived. Men forgo time with their family and women often forgo their career”.

### **How did female participation move between agrarian and industrial era?**

The participation of married women decreased with the transition from an agrarian to an industrialised society in the early nineteenth century. It started to increase again with the growth of the services sector in the early nineteenth century. The first of Professor Goldin’s observations was about how female participation in labour force was incorrectly assessed and thereby, (incorrectly) stated in Censuses and public data. For example, a standard practice entailed categorising women’s occupation as “wife” in records. This was incorrect because the identification did not account for activities other than domestic labour such as working alongside husbands in farms or family businesses, in cottage industries or production setups at home, such as with textiles or dairy goods. According to Professor Goldin, correcting the data about female participation established that the proportion of women in the labour force was considerably greater at the end of the 1890s than was shown in the official statistics. They enumerate that the employment rate for married women was three times greater than the registered Census.

She also observed that prior to the advent of industrialisation in the nineteenth century, women were more likely to participate in the labour force. This was because industrialisation had made it harder for married women to work from home since they would not be able to balance the demands of their family. Even though her research held that unmarried women were employed in manufacturing during the industrial era, the overall female force had declined.

These two factors combined form the basis of the claim that there is no historical consistency between female engagement in the overall labour force and economic growth.

### **What made the curve move upwards?**

The beginning of the twentieth century marked the upward trajectory for female participation in the labour force. According to Professor Goldin, technological progress, the growth of the service sector and increased levels of education brought an increasing demand for more labour. However, social stigma, legislation and other institutional barriers limited their influence.

Two factors are of particular importance here, namely, “marriage bars” (the practice of firing and not hiring women once married) and prevalent expectations about their future careers. The





former, according to Professor Goldin, peaked during the 1930s' Great Depression and the ensuing years — preventing women from continuing as teachers or office workers. About expectations, Professor Goldin notes that women at varied points were subject to different circumstances when deciding on their life choices. Their decisions could be based on an assessment of expectations that might not come to fruition.

#### **How do expectations become a factor?**

The Harvard professor observed that in the early twentieth century, for example, women were expected to exit the labour force upon marriage. When things turned marginally in the second half of the century, married women would return to the labour force once their children were older. However, this meant a reliance on educational choices that were made previously, as the author notes, at a time when they were not expected to have a career. The “underestimation” was overcome in the 1970s when young women invested more in their education.

As the Nobel Prize academy puts it, the exit for an extended period after marriage “also explains why the average employment level for women increased by so little, despite the massive influx of women into the labour market in the latter half of the century.”

Another pivotal factor was the introduction of birth control pills. This created conditions for women to plan their careers better. Even if the pill influenced educational and career choices, this did not translate to the disappearance of the earnings gap between men and women, though it became “significantly smaller since the 1970s”.

#### **When did pay discrimination start?**

According to Professor Goldin, pay discrimination (that is, employees being paid differently because of factors such as colour, religion or sex, among others) increased significantly with the growth of the services sector in the twentieth century. This was surprisingly at a time when the earnings gap between men and women had decreased and when piecework contracts were being increasingly replaced with payments on monthly basis. Thus, the expectations paradigm emerged again, as employers would prefer employees with “long and uninterrupted careers”.

### **SALMAN RUSHDIE'S MEMOIR, 'KNIFE': AN ACT OF DEFIANCE**

In Victory City, Salman Rushdie's novel published earlier this year, Pampa Kampana, fictional poet, princess and the book's protagonist, deliberates on the nature of hubris and the only thing that outlives it: “I have lived to see an empire rise and fall./ How are they remembered now, these kings, these queens?/ They exist now only in words/ While they lived, they were victors, or vanquished, or both./ Now they are neither./ Words are the only victors. What they did, or thought, or felt, no longer exists.../ All that remains is this city of words.” A year into a near-fatal attack that left him with grievous physical injury and probably a far more insidious psychological scar, Rushdie has announced a resurrection of his city of words. *Knife: Meditations After an Attempted Murder*, to be published in April 2024, will document the aftermath of the assassination attempt and the 76-year-old's slow waltz back to life.

A memoir is an intimate narrative, meant as much for an audience as for its author. Written after a considerable passage of time, it offers solace for the injustices and failings of the past; documented in the immediate aftermath of life-changing events, it can be an act of resistance. Rushdie, of course, has never been short of courage. Like the proverbial phoenix, he has risen over and over again from the ashes, to make his voice heard. If that first image of his in *The New Yorker*



six months after the Chautauqua attack was validation of his ability to cock a snook at authoritarianism, the three harrowing decades he spent, some of them in hiding, after Ayatollah Khomeini's fatwa against him following the publication of The Satanic Verses (1988) were proof of his faith in, and activism for, freedom of expression.

## LARGE OZONE HOLE DETECTED OVER ANTARCTICA: IS IT A MATTER OF CONCERN?

Satellite measurements over Antarctica have detected a giant hole in the ozone layer. The European Space Agency Copernicus Sentinel-5P satellite made the recordings on September 16, 2023, as part of the EU's environmental monitoring program.

Claus Zehner, the agency's mission manager for Copernicus Sentinel-5P, told DW that this is one of the biggest ozone holes they've ever seen. "The satellite measured trace gases in the atmosphere in order to monitor the ozone and climate. It showed that this year's ozone hole started earlier than usual, and had a big extension," said Zehner. Experts believe the hole in the ozone is not likely to increase warming on the surface of Antarctica.

"It's not a concern for climate change," said Zehner. Ozone holes grow and shrink every year. The ozone layer is a trace gas in the stratosphere, one of the four layers of the Earth's atmosphere.

It functions as a protective gas shield that absorbs ultraviolet radiation, protecting humans and ecosystems from dangerous amounts of UV. Most skin cancers are caused by exposure to high amounts of UV radiation, so anything that shields us from UV rays helps reduce cancer rates. The size of the ozone hole over Antarctica fluctuates each year, opening each year in August and closing again in November or December.

Zehner said the ozone hole opens up because of the rotation of the Earth causing special winds over the closed landmass of Antarctica. "The winds create a mini climate, creating a shield over Antarctica preventing it from mixing with surrounding air. When the winds die down, the hole closes," he said.

### What caused the giant ozone hole this year?

Scientists believe this year's big ozone hole could be due to the volcanic eruptions at Hunga Tonga during December 2022 and January 2023. "Under normal conditions, gas released from a volcanic eruption stays below the level of the stratosphere, but this eruption sent a lot of water vapor into the stratosphere," said Zehner.

The water had an impact on the ozone layer through chemical reactions and changed its heating rate. The water vapor also contained other elements that can deplete ozone like bromine and iodine. "There isn't much evidence the ozone hole is due to humans," Zehner said.

The hole, which scientists call an "ozone-depleted area" was 26 million square kilometers (10 million square miles) in size, roughly three times the size of Brazil.

### Human-caused ozone holes

While this year's Antarctic ozone hole was likely due to a volcanic eruption, scientists became aware that human activities were creating huge ozone holes in the 1970s.

Ground and satellite-based measurements detected the holes, which were caused by widespread use of chemicals called chlorofluorocarbons.



“The culprit behind ozone depletion was not aerosols in aerosol cans, but the propellants we use as gases to propel the solutions inside. These gaseous propellants contain chlorine, which is released high in the stratosphere and depletes the ozone,” said Jim Haywood, a professor of atmospheric science at University of Exeter in the UK.

The world took action after scientists raised alarm over the ozone holes, and quickly. In 1987, The Montreal Protocol was created to protect the ozone layer by phasing out the production of these harmful substances.

The good news is that the protocol was effective — ozone holes got smaller in the decades after ozone-depleting gas emissions were controlled.

#### **Is climate change reopening ozone holes?**

Scientists agree that ozone depletion is not a principal cause of global climate change.

However, Haywood said there are signs that rising global temperatures could be having an impact on ozone holes. “Our mitigation of the ozone hole was working well since the 1980s, but in 2020 we were taken by surprise when the 2020 ozone hole was very deep and long lasting,” he told DW.

The same was true for 2021. Research showed that the main reason for the large ozone hole in 2020 was due to the wildfires in southeastern Australia that year. Haywood said as the climate crisis carries on, with the Earth continuing to warm, fires are getting more common and more devastating around the globe.

“It’s been an amazing bad year for boreal fires in the Northern Hemisphere this year. If that continues to happen, we get more smoke injected into the stratosphere, and we might get more ozone depletion coming back,” said Haywood.

It’s less clear what impact ozone holes have on the Earth’s climate. Some data shows that ozone holes actually contribute to cooling effects, as they reduce the greenhouse gas effect.

But Haywood said there is evidence ozone holes changes the progression of the seasons.

“If you get ozone depletion, it takes longer for the hole to repair. This means you have a longer, more drawn out polar vortex, so you’ll have wintertime lasting that little bit longer,” he said.

#### **2023 ON COURSE TO BE WARMEST YEAR ON RECORD**

As the world gears up for COP28, there is alarming data on the horizon. The year 2023 is on course to possibly becoming the warmest year in recorded history, with temperatures nearing 1.4°C above the pre-industrial era average.

In September 2023, global temperatures reached a record high. The average surface air temperature was 16.38°C, which is 0.93°C higher than the September average between 1991 and 2020. Moreover, it was 0.5°C warmer than the earlier record set in September 2020.

The month of September 2023 was approximately 1.75°C above the average temperature of September during the 1850-1900 span, which is considered the pre-industrial benchmark.

From January to September 2023, the global surface air temperature was 0.52°C above the 1991-2020 average and 0.05°C higher than the same period in 2016, the warmest year. During this time



frame in 2023, the world's average temperature was 1.40°C higher than the baseline period of 1850-1900.

According to the Copernicus Climate Bulletin, in September 2023, the majority of Europe experienced temperatures significantly higher than the average from 1991 to 2020. A region stretching from France to Finland and extending to north-western Russia reported its hottest September ever. Notably, both Belgium and the U.K. faced unparalleled heatwave conditions at the start of the month.

## HOW PLASTICS AFFECT OUR DAILY LIFE

Recall what grandparents did, before the age of plastics. They would bring their own bags, normally of cotton or jute, bring home the purchase, and later, wash and dry the bags, ready for the next use. They also used glass and steel vessels and bottles. But now, in the age of plastics, when we go to the grocer, vegetable vendor and markets to buy stuff, we all use plastic bags. Traders use plastic bags and bottles for their products and even water. When did the age of plastics start? It was in 1907 that the Belgian scientist Leo Baekeland synthesised the first plastic using formaldehyde and phenol, called it Bakelite, mass produced it and marketed it. This was the dawn of the plastics age. Some of the early products that became 20th century icons were the camera, telephone and radio. Today, just about everything is made of plastics - water bottles, straws, plastic cutlery, polythene bags, baby products, laptops, cell phones, drones and aircrafts. Even Chandrayan used materials made of a combination of metals, glass and plastic in its voyage.

### The downside

However, there is a downside to the plastic age. The UN Environment Programme (UNEP) points out that every day, the equivalent of 2,000 garbage trucks full of plastic are dumped into the world's oceans, rivers, and lakes. Plastic pollution is a global problem. Every year, 19-23 million tonnes of plastic waste leaks into aquatic ecosystems, polluting lakes, rivers and seas. Plastic pollution can alter habitats and natural processes, reducing ecosystems' ability to adapt to climate change, directly affecting millions of people's livelihoods, food production capabilities and social well-being. The UNEP points out that the environmental, social, economic and health risks of plastics need to be assessed alongside other environmental stressors, like climate change. Very little of plastics we discard every day is recycled or incinerated in waste-to-energy facilities. Much of it ends in the soil and the sea. The greenhouse gases emitted by plastics affect the global temperature, costing over 300 billion dollars annually.

### What citizens should do

O Bhongade and R Bhargava from the IIST Indore, write in the journal International Journal of Research and Applied Sciences, Engineering and Technology (2019) that since disposal of postconsumer plastics is increasingly being constrained by legislation and escalating costs, we need alternatives to disposal or land filling. Recycling of plastics is a method for production of the vital resource of liquid and gaseous fuels. Thermal and catalytic degradation, and gasification are alternative methods for recycling of plastic waste to produce fuel having properties similar to commercial fuels. These processes can be done in order to overcome the shortage of commercial fuel and the problem of plastic waste.

Given that we cannot but use plastic material every day, what are the various precautions and positive steps that we can take in our everyday lives? One is not to discard plastic bottles and bags





after use, but reuse them. The second is to use more and more glass and steel products. Follow what our ancestors were doing.

## WHEN SUN AND RAIN MINGLE

**Q: Why are rainbows arc shaped?**

**A:** When the sun shines after rain, we often see an arc of beautiful colours in the part of the sky opposite to the sun. If the rain has been heavy, the bow may spread across the sky and its two ends seem to rest on the earth below. The cause of this interesting phenomenon is the reflection and refraction of the sun's rays as they fall on drops of rain.

As a ray passes into a drop of rain, the water acts like a tiny prism. The ray is bent, or refracted, as it enters the drop and is separated into different colours. As it strikes the inner surface of the drop, it is further refracted and dispersed.

Each colour is formed by rays that reach the eye at a certain angle, and the angle for a particular colour never changes. The higher the sun the lower the bow. If the Sun is higher than 40 degrees, no bow can be seen.

Rain drops that lie at this particular angle and opposite to the sun lie in the form of a full circle or a part of it. Even if there are enough rain drops to form a circle, to an observer on the earth it will look like an arc, as it is limited by the horizon. When the sun is near the horizon, an observer on a high mountain or in a hot-air balloon may see the whole circle of the rainbow.

## SIXTH TASTE

Japanese scientist Kikunae Ikeda first proposed umami as a basic taste — in addition to sweet, sour, salty and bitter — in the early 1900s. About eight decades later, the scientific community officially agreed with him.

Now, scientists have evidence of a sixth basic taste. In a study published recently, researchers have found that the tongue responds to ammonium chloride through the same protein receptor that signals sour taste. Scientists have for decades recognized that the tongue responds strongly to ammonium chloride. However, despite extensive research, the specific tongue receptors that react to it remained elusive. But in recent years, they uncovered the protein responsible for detecting sour taste. That protein, called OTOP1, sits within cell membranes and forms a channel for hydrogen ions moving into the cell. To confirm that their result was more than a laboratory artifact, they turned to a technique that measures electrical conductivity, simulating how nerves conduct a signal.

## PHONOTAXIS: FIRST SOUND, THEN MOTION

**WHAT IS IT?**

The click of crickets in the evening or frogs croaking during the monsoon might sound random or even annoying, but they have a good reason for making these sounds. Scientists call it phonotaxis: the movement by an animal in response to a sound. It has mostly been observed among crickets, moths, frogs, toads, and a few other creatures.



There are two types of phonotaxis: positive and negative. The purpose of positive phonotaxis is attraction. It usually happens when the females of a particular species – including those of crickets and frogs – are attracted to the sounds made by the males. Negative phonotaxis, on the other hand, serves to repel or warn, such as when the sound of a predator nearby signals to an animal that it needs to move away. Crickets, in particular, have been found to steer themselves away from low-intensity ultrasound typically associated with bats (which use it for echolocation).

In 1984, scientists found that Mediterranean house geckos (*Hemidactylus turcicus*) use positive phonotaxis to their advantage. The fields that these geckos inhabited were also home to male decorated crickets (*Gryllodes supplicans*), which used species-specific sounds to attract the females from their burrows. The geckos recognised and followed this call until they reached the burrow, where they consumed the female crickets.

#### NOW A MORE EFFICACIOUS, INEXPENSIVE MALARIA VACCINE

A malaria vaccine — R21/MatrixM — developed by the University of Oxford, manufactured by the Pune-based Serum Institute of India and tested in a phase-3 trial at five sites in four countries — Mali, Burkina Faso, Kenya, and Tanzania — in Africa was recommended (but yet to be prequalified) by the WHO on October 2. Three countries — Nigeria, Ghana, and Burkina Faso — have already approved the use of the vaccine to immunise children aged less than 36 months. According to the WHO, in 2021, there were 247 million malaria cases worldwide and 6,19,000 deaths. About 25 million children are born each year in countries with moderate to high malaria transmission.

The phase-3 trial was conducted in 4,800 children who were randomly assigned to receive either the malaria vaccine or a control (approved rabies vaccine) and neither the participants nor the people conducting the trial knew who got the vaccine and who did not. The five sites in the four countries where the trial was conducted have different malaria transmission intensities and seasonality. The participants received three vaccine doses four weeks apart, and a booster shot at the end of 12 months after the last dose. The primary vaccination was carried out prior to the malaria season in countries where malaria is seasonal or at any time of year in countries where malaria occurs throughout the year.

The results indicate that the vaccine was more efficacious in places where malaria was seasonal than when it was perennial. The authors think that this may partly be due to timing of malaria episodes in countries with seasonal or perennial malaria. The study found that in sites where malaria was seasonal, 82% of malaria episodes in the first year were recorded in the first six months of follow-up, while only 26% of malaria episodes over the first year were recorded in the first six months at the sites where malaria is perennial. The vaccine efficacy is highest 14 days after the third dose and begins to slowly wane. Since the vaccination is carried out just before the beginning of the malaria season, the protection offered is higher when the disease is seasonal than when malaria occurs throughout the year.

The authors claim that besides substantially reducing the number of clinical malaria cases, at 12 and 18 months, there was “significantly reduced” parasite load in children who received the vaccine (R21/Matrix-M). This suggests that the vaccine may help reduce malaria transmission, especially when combined with other strategies such as mosquito nets. According to WHO, the cost of the R21/Matrix-M manufactured by Serum Institute will be between \$2 and \$4 per dose. Serum Institute will produce “over 100 million doses a year”.



## RITUAL TO REALITY: THE EVOLUTION OF HAND HYGIENE POST-COVID-19

In the aftermath of the unprecedented COVID-19 pandemic, the unsung hero of public health has been revealed as hand hygiene, seamlessly integrating itself into the tapestry of our daily lives with unparalleled dedication. What was once a routine act of hand washing metamorphosed into a ritualistic defence mechanism, a formidable shield against an invisible adversary. Society collectively adopted the meticulous art of thorough hand cleansing, elevating hand sanitizers to the status of ubiquitous accessories.

Fast-forward to the present, and the narrative has evolved. The once-ritualistic hand washing, is now a fading custom. As the immediacy of the pandemic diminishes, so does the stringent adherence to hand hygiene practices. The journey from the meticulous choreography of handwashing to its present state symbolises the evolving narrative of a society transitioning from heightened alertness to a semblance of normalcy.

### Simple but powerful tool

In the arsenal of preventative measures during the pandemic, handwashing emerged as a simple yet powerful tool in the fight against the highly contagious SARS-CoV-2 virus. As the pandemic unfolded, public health experts and authorities globally emphasised the significance of regular handwashing as a fundamental practice to reduce transmission rates and protect individuals from infection.

Correct handwashing involves using soap and water to cleanse hands thoroughly, eliminating not only visible dirt but also invisible pathogens, including viruses and bacteria. The mechanical action of rubbing hands together while washing, combined with the soap's ability to break down the viral lipid envelope, proved highly effective in reducing the risk of infection.

Initiated in 2008 with the goal of mobilising people worldwide to wash their hands, Global Handwashing Day is celebrated annually on October 15. This year's theme is 'Clean hands are within reach.'

Speaking to The Hindu, Ranga Reddy Burri, President of the Infection Control Academy of India, highlighted how COVID-19 served as a silver lining, underscoring the importance of handwashing. He emphasised that handwashing is a simple intervention that doesn't require extensive resources. It is a crucial practice that can significantly reduce the burden of various diseases, such as flu, diarrheal disorders, and upper respiratory tract infections. In fact, proper handwashing can potentially halve child mortality, especially in low and middle-income countries.

Dr. Burri pointed out that in many developing countries, diarrhoeal disorders remain a significant burden. Improving hand hygiene in communities could reduce such disorders by at least 50%. The major impediment to this improvement is a behavioural one, as people are often not taught about the necessity of handwashing from childhood, especially after defecation, travelling, and eating. While installing such practices in adults under ordinary circumstances can be challenging, extraordinary situations like the COVID-19 pandemic have proven effective in altering behaviour due to fear, he said.

### Activating schools

To ensure widespread public awareness, activating schools to engage in such projects is crucial. This involves not only incorporating these initiatives into the curriculum but also promoting them



as integral to overall good health practices. Such efforts not only contribute to immediate health benefits but also enhance our readiness for future pandemics and epidemics. Dr. Burri emphasised that heightened individual preparedness translates into elevated global health preparedness.

A 2019 World Health Organization (WHO) report disclosed alarming statistics: nearly 384,000 deaths due to diarrhoea and 20 million Disability-Adjusted Life Years (DALYs) were linked to inadequate hand hygiene practices. This issue was particularly pronounced in Africa and South-East Asia. In October 2022, the United Nations International Children's Emergency Fund (UNICEF) conducted a comprehensive study in India focusing on the bottleneck analysis of hand hygiene programming. The study's key findings unveiled that 76% of households in the region possess a functional tap connection. Moreover, a notable 91% of respondents acknowledged the importance of washing hands with soap in reducing the risk of disease transmission.

However, the study also brought to light some concerning gaps in knowledge about handwashing practices. Specifically, 15% of respondents were unaware of even a single step in the proper handwashing process, while 30% demonstrated awareness of all the correct steps. The data further indicated that 79% of individuals were aware of the need to wash hands with soap after using the toilet, with slightly lower percentages for other scenarios: 77% before meals, 62% after returning from outside, 40% after cleaning homes or handling garbage, 30% after coming into contact with sick individuals, and 19% after sneezing or coughing.

One significant revelation from the study was the absence of budgeted activities within the Departments of Women and Child Development, Health and Family Welfare, and Education dedicated to promoting hand hygiene. The study emphasised that none of these departments had allocated funds for initiatives specifically targeting hand hygiene promotion. Additionally, the study underscored the urgent need for improvements in Anganwadi centres, noting a lack of basic hand washing infrastructure, including inadequate water supply for children. The study concluded by highlighting the imperative for prompt upgrades to address these deficiencies in hand hygiene facilities.

#### **No Need for antimicrobial soaps**

In routine hand washing scenarios, there is no need for antibacterial soaps. The public is advised to steer clear of antibacterial soaps under normal circumstances and to avoid hand sanitizers unless access to tap water or a sink is limited. A basic, traditional hand soap suffices to maintain hygiene and prevent infections. The post-COVID surge in disinfectant and antiseptic usage is cautioned against, as it may lead to consequences akin to the current Antimicrobial Resistance (AMR).

Kiran Madala, Scientific Committee Convenor of Indian Medical Association Telangana State warned that, just as with AMR, there is a looming threat of antiseptic and disinfectant resistance, emphasising that no chemical is entirely benign and that all substances have their own effects and potential side effects.

#### **Way forward**

In order to ensure a consistent and effective messaging strategy on the importance of handwashing, the government needs to establish a cohesive communication framework.





This should involve a structured approach, akin to a pyramid, connecting ASHA workers at the grassroots level to tertiary care hospitals. Drawing inspiration from successful past campaigns like 'Hum Do Hamare Do' for the 2-child policy and door-to-door polio immunisation drives, the government should prioritise handwashing as a top-three agenda item.

The need for a sustained and consistent campaign cannot be overstated. In the same vein as previous initiatives, incorporating a memorable jingle can enhance the public's awareness of the significance of hand hygiene. On another front, addressing the inadequacies in infrastructure is crucial. Even in urban areas, the lack of accessible and sanitary public restrooms poses a significant challenge, contributing to the spread of infections.

The government must direct its attention toward developing public facilities for defecation and urination, ensuring not only their availability but also maintaining high standards of hygiene, shared a government doctor from a tertiary care hospital.

Furthermore, integrating hand hygiene into the school curriculum is pivotal. By instilling these practices at a young age, we can establish lifelong habits.

However, the effectiveness of such measures depends on the presence of adequate facilities and sanitation within government educational institutions. It is imperative that the government not only formulates educational programs but also invests in the necessary infrastructure to support these initiatives.

#### WHY I'M STILL MASKED UP

At a recent medical seminar, I was approached by a doctor colleague who wanted to know why I was still wearing an N95 mask. I explained that I use a mask to reduce the risk of picking up an infection lingering in the air, and I do it depending on the risk assessment of each individual situation. For instance, the seminar was held in a small, crowded room with no windows: the chance of picking up an infection was higher than while walking on the road.

**For clarity, I used the analogy of a seatbelt.**

During a high-speed collision, the human body is turned into a projectile, and is abruptly thrust forward due to the momentum of the car. A seat belt stops the person from dislodging from the seat, preventing injury, potentially saving lives.

Wearing a seatbelt is obviously of no use inside a parked car, because there is no risk of a collision. It might not make any difference in a low-speed collision either.

Masks are similar, use must be dictated by the individual situation. The following factors are worth considering while assessing individual risk.

COVID-19 is no longer the destructive force it was in 2020 and 2021, when millions died. Those who survived natural infection or underwent vaccination have acquired immune memory. Although this doesn't stop the virus from infecting again, it reduces the chance of severity. A cyclical viral disease like many others, COVID comes in waves spread apart by several months. Currently it is active in the United States, U.K. and Canada.

After the recent surge in April-May 2023, COVID-19 cases in India are currently at a low point. It will likely be a few months before the next wave arrives. Those at greater risk are the elderly and people who have significant underlying conditions such as chronic kidney disease. Despite being



vaccinated, these individuals could sometimes have severe outcomes following COVID. They must therefore be extra cautious when cases rise again. Additionally, since at least 5% of infections can lead to Long COVID, it is a good strategy to minimise the risk of contracting the virus.

N95 masks provide protection by creating a secure seal that prevents air from leaking. Their electrostatically charged filter is able to trap particles that are even smaller than the gaps between the fibers. Viruses can't fly on their own; they travel within tiny mucus particles, the smallest of which are called aerosols. These aerosols, generated by talking, singing, and breathing, can linger in indoor air like mist. Masks and HEPA filters trap aerosol particles, thus preventing respiratory infections. Ensuring clean indoor air is vital for health. When the air quality is poor, masks provide us with an additional opportunity to protect ourselves.

A special advantage of the mask is that it is variant-proof. In other words, although mutations help the virus escape vaccine protection, they do not diminish protection offered by the N95 mask. Surgical masks offer electrostatic filtering, but fit is less secure.

At this time, from India's standpoint, outside of healthcare settings, there is no need for a healthy person to wear a mask outdoors or in large well-ventilated indoor spaces. However, for someone spending a long time in a crowded closed space, the protection of an N95 mask is worthwhile. This is particularly valuable for those who are more susceptible to severe illness or have dependents in the vulnerable category.

## HOW WAS MRNA RESEARCH USED TO FIGHT COVID?

### The story so far:

On October 2, Nobel Prize week began with the 2023 Prize in Physiology or Medicine being awarded to Katalin Karikó and Drew Weissman. They were awarded the prize for their "discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19".

### What are mRNA vaccines?

mRNA, which stands for messenger RNA, is a form of nucleic acid which carries genetic information. Like other vaccines, the mRNA vaccine also attempts to activate the immune system to produce antibodies that help counter an infection from a live virus. However, while most vaccines use weakened or dead bacteria or viruses to evoke a response from the immune system, mRNA vaccines only introduce a piece of the genetic material that corresponds to a viral protein. This is usually a protein found on the membrane of the virus called spike protein. Therefore, the mRNA vaccine does not expose individuals to the virus itself.

According to an article by Thomas Schlake et al, in RNA Biology, RNA as a therapeutic was first promoted in 1989 after the development of a broadly applicable in vitro transfection technique. A couple of years later, mRNA was advocated as a vaccine platform. He says, "mRNA offers strong safety advantages. As the minimal genetic construct, it harbours only the elements directly required for expression of the encoded protein." A common approach by vaccine makers during the pandemic was to introduce a portion of the spike protein, the key part of the coronavirus, as part of a vaccine. Some makers wrapped the gene that codes for the spike protein into an inactivated virus that affects chimpanzees, called the chimpanzee adenovirus. The aim is to have the body use its own machinery to make spike proteins from the given genetic code. The immune system, when it registers the spike protein, will create antibodies against it.



### How are these vaccines different?

A piece of DNA must be converted into RNA for a cell to be able to manufacture the spike protein. While an mRNA vaccine might look like a more direct approach to getting the cell to produce the necessary proteins, mRNA is very fragile and will be shredded apart at room temperature or by the body's enzymes when injected. To preserve its integrity, the mRNA needs to be wrapped in a layer of oily lipids, or fat cells. One way to think of this is that an mRNA-lipid unit most closely mimics how a virus presents itself to the body, except that it cannot replicate like one. DNA is much more stable and can be more flexibly integrated into a vaccine-vector. In terms of performance, both are expected to be as effective.

A challenge with mRNA vaccines is that they need to be frozen from -90 degree Celsius to -50 degree Celsius. They can be stored for up to two weeks in commercial freezers and need to be thawed at 2 degrees Celsius to 8 degrees Celsius at which they can remain for a month. But a major advantage of mRNA and DNA vaccines is that because they only need the genetic code, it is possible to update vaccines to emerging variants and use them for a variety of diseases.

Viral vector vaccines, like Covishield, carry DNA wrapped in another virus, but mRNA are only a sheet of instructions to make spike proteins wrapped in a lipid (or a fat molecule) to keep it stable. In the case of COVID-19, mRNA vaccines developed by Moderna, Pfizer and Pune-based Gennova Biopharmaceuticals, these instructions alone are capable of producing the spike protein, which the immune system then uses to prepare a defence.

### Why is it significant?

After the Nobel Prize was announced, Dr. Soumya Swaminathan, formerly chief scientist of the WHO, posted on X, formerly Twitter, that painstaking research over decades and a belief that mRNA technology would have human applications one day have earned the Nobel Prize for Dr. Karikó and Dr. Weissman. "We will see more mRNA products in the near future," she said. In its release, the Nobel Assembly pointed out that enthusiasm for developing mRNA technology for clinical purposes was initially limited because of hurdles. "Ideas of using mRNA technologies for vaccine and therapeutic purposes took off, but roadblocks lay ahead. In vitro transcribed mRNA was considered unstable and challenging to deliver, requiring the development of sophisticated carrier lipid systems to encapsulate the mRNA. Moreover, in vitro-produced mRNA gave rise to inflammatory reactions."

### What were the challenges Dr. Karikó faced?

Dr. Karikó's struggles are of special note among this year's winners. "Ten years ago...I was kicked out, from Penn [Pennsylvania University] and forced to retire," she told Adam Smith during her interview with nobelprize.org after the winners were announced. Dr. Karikó spent a large part of her career on the periphery of academic circles, always in the pursuit of grants to fund her research. Dr. Karikó spent most of the 1990s writing grant applications to fund her mRNA research. She believed that mRNA was key to treating diseases that needed the right kind of protein to fix the problem.

Together with Dr. Weissman, she published a paper in 2005 that highlighted breakthrough research in the field. In 2015, they figured how to deliver mRNA into mice using a fatty coating called "lipid nanoparticles" that protected the mRNA from degradation. Both her innovations were key to the development of COVID-19 vaccines developed by Pfizer and its German partner BioNTech.



## UNRAVELLING THE LINKS BETWEEN CONSANGUINITY AND GENETIC DISEASES

Many genetic concepts were unearthed by studying the intricate tapestry of royal marriages in Europe and the diseases the individuals had. But since the democratisation of genetics and genomics, scientists have been able to study the general population in the same way, on a larger scale

In the rich tapestry of human ancestry and history, there is one genomic thread that weaves a particularly complex narrative. It connects our lineage through the many generations across our existence on earth, and also defines our genetic vulnerabilities. This thread is none other than consanguinity: the practice of marrying close relatives, an age-old tradition that is still practised widely in several human societies worldwide.

According to one estimate, 15-20% of the world's population practises inbreeding, especially in Asia and West Africa.

Consanguinity has both shaped our cultural landscapes and left an indelible mark on our genetic destiny. It is a social as well as genetic construct. In the social context, it means marriage between individuals related by blood; in the genetic context, it means marriage between genetically related individuals, otherwise called inbreeding.

Using modern genomic tools, scientists can quantify the relatedness between two individuals as a percentage of the genetic material shared between them (identity by state) or by the genetic material in stretches of a chromosome that are identical to each other and are inherited from parents (identity by descent).

### **The misfortunes of royal marriages**

There is evidence to suggest that ancient human civilisations, such as those of the Egyptians and Incas, among others, could have practised inbreeding or consanguinity. In particular, a body of historical and genetic evidence suggests that King Tutankhamun of Egypt was born to parents who were blood relatives.

We are still understanding the genetic and population effects of these practices. So it isn't surprising that many key insights that are biomedically relevant – including discovery of new genes and genetic correlates – have been through the lens of consanguinity. Many genetic concepts were unearthed by studying the intricate tapestry of royal marriages in Europe and the diseases the individuals had. But since the democratisation of genetics and genomics, scientists have been able to study the general population in the same way, on a larger scale.

Scientists have extensively studied the level of inbreeding in various populations around the world. Some of the most well-studied populations in this regard include the Ashkenazi Jews and the Amish. With more than 4,000 endogamous groups – people marrying within the same caste/tribe or group – India has been a fertile ground for consanguinity.

Scientists at the CSIR-Centre for Cellular and Molecular Biology, in Hyderabad, have also identified several endogamous populations in India with very high levels of genetic relatedness, and have identified many populations in India with a very high level of inbreeding – some more so than the Ashkenazi Jews.





Studies have found that a significant fraction of the global population practises consanguinity and that that has increased the mortality and the rate of recessive genetic diseases in these peoples.

#### **Benefits of consanguinity**

While consanguinity is undesirable among humans, scientists widely wield the principle of mating between related offspring to breed plants and animals. With such efforts in experimental settings, they have been able to eliminate deleterious genetic alleles in populations. (Alleles are different versions of the same gene.)

Taking cues from these efforts, it is possible to anticipate evolutionary 'bottleneck' events in the past that could have resulted, similarly, in the removal of deleterious alleles from humans.

There is some evidence suggesting that ancient populations in which bottlenecks restricted mating choices would have resulted in consanguinity. In turn, such evolutionary or natural bottleneck events and consanguinity could have provided a chance to eliminate deleterious alleles while outbreeding would have created opportunities for heterozygotes (individuals with two alleles for a gene) with advantageous traits.

This said, precisely how such inbreeding and bottlenecks have contributed to human traits and diseases remains an open question.

#### **Molecular measures of consanguinity**

We inherit one copy of each chromosome from our parents. When the gametes – i.e. the reproductive cells – form, the chromosomes recombine. That is, genetic information, as blocks of genomic regions in the chromosomes, are exchanged.

In an event when the parents are related to each other, there is a chance that there will be identical blocks of genetic information in both chromosomes. These blocks are called 'runs of homozygosity', and the subsequent exchange is said to be autozygous.

The percentage of autozygosity in an individual's genome thus creates a unique way to understand the genetic history of the population: in terms of sexual unions between related individuals over many generations. Other measures have also been developed to measure the stretches of chromosomes that are identical to each other. This is in part due to the genome-scale data now available to scientists, with which they can estimate the kinship between any two individuals.

#### **Consanguinity and disease**

Many modern consanguineous societies, such as the Amish population in the U.S., have been studied for recessive diseases. In fact, scientists have extensively used autozygosity as an approach to identify new genetic diseases in populations where consanguineous marriage practices are the norm.

The results of these studies have helped us uncover previously unknown genetic diseases as well as estimate different populations' genetic predisposition to common diseases.

At the same time, we are still to uncover the relationship of consanguinity with common yet complex diseases such as type-2 diabetes, obesity, and hypertension. They will have to be investigated in greater detail.



One recent study, published on September 26 this year in the journal Cell, suggested that consanguinity could increase the risk and the rate of diseases like type-2 diabetes.

In the coming years, advances in genomics research indicate that we can expect innovative solutions to mitigate the risks associated with consanguinity on genetic diseases.

This in turn could usher in a future where personalised medicine, genetic diagnostics, and genetic counselling can play a pivotal role in improving the health outcomes of affected individuals and their families.

## IMPROVING THE COMPATIBILITY OF PIG ORGANS FOR TRANSPLANTATION

The design and successful transplantation of kidney grafts from genetically modified pigs into non-human primates has been described in a recent study published in Nature. Modifying the pig genomes to remove antigen coding genes, add human genes and eliminate pig viruses, resulted in long-term survival of the monkey recipients, up to around two years. This preclinical work may move the field a step closer to clinical testing of genetically modified pig kidneys for human transplantation.

The transplantation of animal organs into humans (xenotransplantation) may offer a solution to the worldwide organ shortage. Pigs are promising donor animals but several obstacles first require overcoming before they can be considered clinically viable, notably organ rejection and risk of zoonosis (transmission of animal viruses to humans).

Previous work has identified three glycan antigens expressed in pigs that are recognised by human antibodies and attacked, leading to rejection of the organ. The porcine endogenous retrovirus has also been identified as a risk for transmission into humans.

Wenning Qin from Cambridge, Massachusetts, U.S. and other build on this previous research by introducing alterations into the genome of a donor pig and achieve successful transplantation of kidney grafts from a genetically engineered pig into a cynomolgus monkey model (a non-human primate with several human-like traits).

The researchers introduced 69 genomic edits into the porcine donor (a Yucatan miniature pig), knocking out three glycan antigens thought to induce rejection, overexpressing seven human transgenes (to reduce hostility of primate immune system) and inactivating all copies of the porcine retrovirus gene.

These kidney grafts survived substantially longer than grafts with only the glycan antigen knockouts (176 days versus 24 days), suggesting that the expression of these human transgenes offers some protection against rejection. Combined with immunosuppressive treatment, the transplant provided long-term primate survival of up to 758 days. These results demonstrate the promise of pig organs in future human transplantations and bring the technique a step closer to clinical testing, the authors conclude.

“These results show that preclinical studies of renal xenotransplantation could be successfully conducted in nonhuman primates and bring us closer to clinical trials of genetically engineered porcine renal grafts” they write.



## WE NEED EVIDENCE-BASED TRADITIONAL MEDICINE

Without going into the specifics of this particular case, let us examine certain general aspects. What is the position of traditional medicine in a modern world? What is evidence-based medicine? How does one evaluate a therapy and what steps, if any, should governments take to ensure the health of the population?

### **Modern medicine**

It is a fact that irrespective of the advances of modern medicine, several systems which lay claim to healing, and which all fall under the broad category of alternative medicine, exist. Certain systems such as Ayurveda, Unani, and Siddha have their own pharmacopeia in India.

It is important to note here that modern medicine is not allopathy (which means “opposed to symptoms”), a term coined by Hahnemann in the 18th century, and used pejoratively, to differentiate it from his newly invented system, homeopathy. Modern medicine really became science-based only from the late 19th century when advances in technology made not only the study of the functioning of the human body in health and disease more accurate, but also led to safe anaesthesia and surgery. Later, this process led to marvels such as dialysis for kidney failure and the heart-lung machine which made surgery on the heart a daily affair.

The development of scientific thought in the 20th century, including the Popperian idea of falsifiability, led to advances in evaluating medical therapies. Subjected to the methods of modern science, which are continually being refined, many therapies were found to be ineffective and abandoned. This is the strength of the modern method, the recognition that science continually advances and self-corrects. Modern medicine is western only geographically and not epistemically. Modern medicine, a part of modern science, tests every new therapy and accepts it into the canon if found effective. Due to the greater scientific capabilities of the West, which are a result of their richer economies and the post-renaissance historical realities, a great part of modern technology has been developed there, but it is false to think that there is anything epistemically “western” about it. One of the great triumphs of the post-World War II phase of human civilisation is the greater and quicker flow of ideas across the world.

The physiological basis of Ayurveda is not sound, but that does not ipso facto mean that its therapies are not sound either. Like many traditional medical systems everywhere, Ayurveda was constrained in its understanding of how the human body works by the lack of available technology. However, the Ayurveda classics were constant in their emphasis on the need to base diagnoses and therapies on a sound understanding of the human body. A reason-based world view is what differentiates Ayurveda epistemologically from the erstwhile faith-based forms of the Atharva Veda. Proponents of Ayurveda who claim that everything was already known to the ancient people do it a great disservice and stultify its growth and development. One of the greatest triumphs of modern epistemology is its ability to synthesise ideas from across the world to build a coherent system of how the world functions. This is an ongoing process, subject to corrections and improvements as thought and technology improve, building on past knowledge.

In modern drug development, the commonly used method is to isolate the active principle. Thus, most modern medicines are single ingredient and only a few are combinations. Also, the exact amount of the active principle is carefully calculated. Ayurvedic medicines are commonly combinations, and it is uncertain how these combinations interact with each other. It would increase the acceptability of Ayurvedic medicines in the scientific community if they were



evaluated by the methods of modern science in a way that does not compromise with the wholeness of Ayurvedic formulations. New investigational methods and trial designs which can evaluate Ayurvedic therapies without undermining the classical bases of administering them must be worked out. The Ministry of AYUSH must facilitate this.

The purpose of government policy is to make life better for the people. The health of the people should not be hostage to false ideas of nationalism. The aim should be to carry out an evidence-based appraisal of all traditional medical systems, retain and develop what is useful, and integrate them into one cogent system of medicine available to all.

#### **A disservice**

A few individuals do a disservice to the cause of evidence-based medicine by denouncing traditional medical systems wholesale. Science requires open-mindedness disciplined by scepticism. Denouncing traditional systems in toto would result in a hasty dismissal of valuable medical experience that has undergone repeated, albeit informal, verifications at the hands of generations of practitioners. Ignoring such time-honoured knowledge bases in the name of science is a disservice to the scientific attitude as also to the cultural achievements of yore. It must be remembered that the Nobel-winning anti-malarial artemisinin was synthesised thanks to investigators who were open-minded enough to take cues from a 1,600-year-old text of Traditional Chinese Medicine.

### ON WORLD ARTHRITIS DAY, LEARN ABOUT THE COMMON CONDITIONS

Arthritis refers to joint pain or joint disease, the inflammation or swelling of one or more joints. While there are more than 100 such conditions, two common ones are osteoarthritis and rheumatoid arthritis.

In osteoarthritis, the cartilage, which is the connective tissue that covers the ends of your bones where they form a joint, wears down, causing the underlying bone to change. It frequently occurs in the hands, knees, hips and spine. Its prevalence tends to increase with age.

As per a 2022 paper in the Osteoarthritis and Cartilage journal, 62.35 million people in India had osteoarthritis as of 2019.

The other common condition, rheumatoid arthritis, is a form of autoimmune inflammatory arthritis.

What happens here, is that the immune system attacks healthy tissue, causing painful swelling in the affected parts. RA affects the lining of your joints, and can eventually lead to bone erosion and joint deformity.

While it is common in the hands, wrists and knees, in some people, it can damage a number of organs including the skin, eyes and heart.

How is arthritis treated? When it comes to osteoarthritis, there are certain risk factors: women for instance, are more likely to develop it after the age of 50, and genetics too play a role.

Treatment options include physical and occupational therapy, medication for the pain and surgical options if other treatment has not worked.





The specific causes of rheumatoid arthritis are not known, but it is believed that environmental factors, including viral/bacterial infections or smoking, can trigger it in people born with specific genes. While there is no cure for RA, it can be treated and managed with medication, physical therapy and self management/care.

What can you do? The first step, if you suspect you have symptoms of arthritis, is to get an accurate diagnosis and then explore treatment options. Can you prevent arthritis? While there is no certain way of doing this, what you can do, if you currently have healthy joints, is maintain their mobility and function, says the website of the U.S.-based Arthritis Foundation. As is the case in the prevention of many other diseases, also eat healthy and avoid smoking!

## INDIA NEEDS YOUTH MENTAL HEALTH FOCUS TO STRIKE DEMOGRAPHIC GOLD

India's policies need to shift from the current 'medical model' of mental health to the convergent model, which recognises the complex interplay of behavioural, environmental, biological, and genetic factors throughout an individual's life

India is a country teeming with more than 1.4 billion people, and is in the throes of a demographic transformation. Its adolescent population, aged 10-19 years, accounts for a substantial portion of the national total, some 253 million. This demographic segment is a significant part of what economists and demographers have come to call the 'demographic dividend'.

These young minds hold the promise of economic prosperity and development – but few also acknowledge that this potential actually hinges on these young men's and women's physical as well as mental well-being.

### **Youth mental health out of focus**

Adolescent health and well-being have become important in public health discourses worldwide. Acknowledging the adolescent cohort's pivotal role in society, the governments of both the States and the nation have introduced numerous policies and programmes to protect and respond to the health-wise needs of these young individuals. However, a closer look reveals that mental health does not figure as predominantly as warranted in many of these policies.

Adolescence is a time of profound transformation. It marks the transition from childhood to adulthood, and is laden with challenges – including those related to the perception of one's body and body image issues. Society's expectations regarding the 'ideal' behaviour and body types can significantly affect physical and mental health. The weight of academic expectations, peer pressure, and concerns about the future also take a toll on mental health at this time.

The Rashtriya Kishor Swasthya Karyakram (RKSK) is a Government of India policy that deals exclusively with adolescent health. It was rolled out on January 7, 2014. But despite having been in operation for nearly a decade, the mental health strategies under this policy have been implemented painfully slowly.

Under the purview of the National Health Mission, State governments were responsible for implementing the RKSK policy – including setting up 'Adolescent Friendly Health Clinics' as part of its facility-based strategies.

But to this day, the RKSK has not shared data on its critical components, including (but not limited to) mental health, violence, injuries, and substance misuse. It has also initiated few discussions on



the curative aspect of mental health. And despite having recruited and trained numerous counsellors (both male and female) dedicated to adolescent health within the first three years of RKSK, many district-level vacancies persist.

Other policies – like the Sarva Shiksha Yojana (focused on learning disabilities), the National Youth Policy (substance abuse), the National Mental Health Policy, the Yuva Spandana Yojana (only in Karnataka) – address various immediate and underlying factors that affect mental health.

However, most policies that are centred on adolescents have regarded mental health as a secondary concern.

### **An epidemic in the wings**

Adolescents in India are particularly vulnerable to mental health problems like anxiety disorders and depression. Official reports have stated that among Indians aged 13-17 years, the prevalence of severe mental illness was 7.3% (as of 2015-2016). Even three years after the onset of the COVID-19 pandemic, mental health disorders among adolescents – often concealed beneath the promise of prosperity associated with this demographic – continue to become more common and have their effects felt.

An informal survey conducted by one of the authors (Smriti Shalini) from the Tata Institute of Social Sciences, Mumbai, earlier this year revealed little awareness of RKSK among school-going adolescents, parents, and teachers in the urban slums of Mumbai – and less so of the digital interventions of RKSK, a mobile app called ‘Saathiya Salah’ and an e-counselling within that app.

Further, during a focused group discussion, students attending a school that facilitated access to a school-based counsellor said that they had negatively labelled the counsellor as a “tension teacher”, and that they were reluctant to share their concerns with this individual, fearing that they might be reported and have their privacy violated.

In India, mental health disorders are underreported due to poor awareness, lack of help-seeking behaviour (stemming from stigma), a desire and/or expectations to be self-reliant, and insufficient prioritisation in the policy framework.

Schemes designed to improve access to mental healthcare need to accommodate these factors.

In addition, through various studies, researchers have identified poverty, childhood adversity, and violence as the three main risk factors for the onset and persistence of mental-health disorders. They were also associated with poor access to good quality education, lack of employment, and reduced productivity. Educational failures and mental disorders in adolescence also interact in a vicious cycle. Equity in healthcare remains a significant issue in India, and this also extends to mental health. Access to mental healthcare services is often skewed along the same lines – wealth, caste, location, gender, etc.

Gender disparities are particularly worrisome. Adolescent girls in India face unique challenges, including gender-based violence and discrimination, that can severely affect their mental well-being. Conversely, adolescent boys are commonly expected to conform to masculine ‘norms’ of stoicism and are victims of bullying and shaming. Many children from ‘broken homes’ also experience dysfunctional family relations and face discrimination within the family, often resulting in bottling-up as well as issues with managing anger and delegating authority.



### A dividend beckons

Based on studies, surveys, and discussions with stakeholders, experts have identified the following solutions.

First, policymakers should endeavour to shift from the current “medical model” of mental health to the convergent model of mental health: the latter recognises the complex interplay of behavioural, environmental, biological, and genetic factors throughout an individual’s life, especially during the crucial stages of childhood and adolescence. To this end, well-meaning programs like RKSK can learn from the experiences of other countries to better implement its vision.

For example, the successful implementation of the ‘Whole School, Whole Community, Whole Child’ model in the U.S. embraces a holistic approach to children’s well-being by considering factors such as nutrition, physical activity, and emotional health within the school environment.

Initiatives like establishing peer support groups in schools and colleges and community-based interventions leveraging technology can also encourage help-seeking behaviour.

Second, a multi-sector approach that includes underlying factors like education and nutrition should be at the core of policies to realise the full potential of adolescents.

India’s youth is aspirational and deserves a good education. We need better pedagogy and resources that provide well-rounded development as well as employment. A good education empowers youngsters to access resources, assert their rights, and tackle societal and family issues better.

Third, we must recognise that a healthy mind thrives within a healthy body. The government should continue to make the improvement of school environments and health-promoting conditions a priority in parallel with efforts to combat pressing health concerns like malnutrition and anaemia. Our nation’s future is banking on evidence-based policy-making and unwavering political commitment to be able to move mountains.

### WHY ARE THESE KIDS FALLING SICK DESPITE A MEASLES VACCINATION?

Subacute Sclerosing Panencephalitis (SSPE) is a progressive neurological disorder in children and young adults that affects their central nervous system and causes brain inflammation. It results from a measles virus infection acquired earlier in life, which can be either a reactivation of the virus or an abnormal immune reaction to it.

It is a slow, persistent and a devastating complication, which alters a child’s immune system. Although measles is preventable with vaccination, doctors are worried whether the existing protection shield is enough, considering all the affected children had taken their shots. They are wondering if they got the measles virus before the vaccination was administered or completed and it lay latent in the body.

Measles is a definite risk factor but even those who are not vaccinated or incompletely vaccinated can develop SSPE at later stages too. Patients have a reduced cellular immune response and a highly increased humoral immune response, which prevent the body from completely eradicating the virus. It then becomes latent and stays in the brain. Officially, SSPE has not been categorised as a rare disease in India under which patients get to avail compensation.