

22nd to 28th June 2025

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INTERNATIONAL

U.S. TO SCREEN SOCIAL MEDIA ACCOUNTS OF NON-IMMIGRANT VISA APPLICANTS

Just days after the United States announced that foreign students applying for a visa must unlock their social media accounts for government review, the U.S. government has extended this condition to all individuals applying for an F, M, or J non-immigrant visa.

In a social media post, the U.S. Embassy in India, said that “every visa adjudication is a national security decision”, while adding that the applicants will have to “adjust the privacy settings on all of their personal social media accounts to ‘public’ to facilitate vetting necessary to establish their identity and admissibility to the United States.”

Noting that the United States has required visa applicants to provide social media identifiers on immigrant and non-immigrant visa application forms since 2019, it added that all available information will be used in the visa screening and vetting “to identify visa applicants who are inadmissible to the United States, including those who pose a threat to U.S. national security”.

With regards to the information regarding visa scheduling, the U.S. State Department in a June 18, 2025 statement said that the overseas posts will resume scheduling F, M, and J non-immigrant visa applications soon. Applicants should check the relevant embassy or consulate website for appointment availability.

U.S. SUPREME COURT CURBS JUDGES’ POWER ON CITIZENSHIP

The U.S. Supreme Court dealt a blow on Friday to the power of federal judges by restricting their ability to grant broad legal relief in cases as the justices acted in a legal fight over President Donald Trump’s bid to limit birthright citizenship, ordering lower courts that blocked the policy to reconsider the scope of their orders.

However, the Court’s 6-3 ruling authored by conservative Justice Amy Coney Barrett did not let Mr. Trump’s policy go into effect immediately and did not address the policy’s legality.

The Justices granted a request by the Mr. Trump administration to narrow the scope of three nationwide injunctions issued by federal judges in Maryland, Massachusetts and Washington State that halted enforcement of his directive while litigation challenging the policy plays out. The ruling was written by conservative Justice Amy Coney Barrett.

With the Court’s conservatives in the majority and its liberals dissenting, the ruling specified that Mr. Trump’s executive order cannot take effect until 30 days after Friday’s ruling.

“No one disputes that the Executive has a duty to follow the law. But the Judiciary does not have unbridled authority to enforce this obligation - in fact, sometimes the law prohibits the Judiciary from doing so,” Ms. Barrett wrote.

Liberals dissent

Justice Sonia Sotomayor, in a dissent joined by the court’s other two liberal members, wrote, “The majority ignores entirely whether the President’s executive order is constitutional, instead focusing only on the question whether federal courts have the equitable authority to issue universal injunctions. Yet the order’s patent unlawfulness reveals the gravity of the majority’s



error and underscores why equity supports universal injunctions as appropriate remedies in this kind of case.”

On his first day back in office, Mr. Trump signed an executive order directing federal agencies to refuse to recognise the citizenship of children born in the United States who do not have at least one parent who is an American citizen or lawful permanent resident, also called a “green card” holder.

More than 1, 50,000 newborns would be denied citizenship annually under Mr. Trump’s directive , according to the plaintiffs who challenged it, including the Democratic attorneys general of 22 states as well as immigrant rights advocates and pregnant immigrants.

TRUMP CASTS DOUBT ON MUTUAL DEFENCE CLAUSE AHEAD OF NATO SUMMIT

The NATO alliance has crafted a summit in The Hague this week to shore itself up by satisfying US President Donald Trump with a big new defence spending goal – but it now risks being dominated by the repercussions of his military strikes on Iran.

- The two-day gathering is also intended to signal to Russian President Vladimir Putin that NATO is united, despite Trump’s previous criticism of the alliance, and determined to expand and upgrade its defences to deter any attack from Moscow.
- The summit and its final statement are meant to be short and focused on heeding Trump’s call to spend 5% of GDP on defence – a big jump from the current 2% goal. It is to be achieved by investing more in both militaries and other security-related spending.
- Spanish Prime Minister Pedro Sanchez, however, upset NATO Secretary General Mark Rutte’s preparations on Sunday as he declared Madrid did not need to meet the new spending target even as Spain approved the summit statement.
- Ukrainian President Volodymyr Zelenskyy has had to settle for a seat at the pre-summit dinner on Tuesday evening – rather than a formal session with the leaders when they meet on Wednesday – due to his volatile relationship with Trump.
- The US bombing of Iranian nuclear sites at the weekend makes the summit much less predictable than Rutte – a former prime minister of the Netherlands hosting the gathering in his home city – and other NATO member countries would like.
- Much will depend on the precise situation in the Middle East when the summit takes place – such as whether Iran has retaliated against the US – and whether other NATO leaders address the strikes with Trump or in comments to reporters.

Do You Know:

- NATO, or the North Atlantic Treaty Organisation, was set up in 1949 by the US, Canada, and several western European nations to ensure their collective security against the Soviet Union. It was the US’s first peacetime military alliance outside the western hemisphere. Thirty countries are members of NATO currently. NATO is headquartered in Brussels, Belgium. The headquarters of the Allied Command Operations is near Mons, also in Belgium.
- Members of NATO are committed to mutual defence in response to an attack by any external party. Collective defence lies at the very heart of NATO, “a unique and enduring principle that



binds its members together, committing them to protect each other and setting a spirit of solidarity within the Alliance". This is laid out in Article 5 of the North Atlantic Treaty, the founding treaty of NATO.

- Article 5 reads: "The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area."
- At the end of WW II, as battered European nations started to rebuild their economies, the US, which believed that an economically strong, re-armed, and integrated Europe was critical to prevent the westward expansion of communist USSR, embarked on a programme to supply economic aid to the continent on a massive scale.
- The European Recovery Programme, known as the Marshall Plan after President Harry S Truman's Secretary of State George C Marshall, promoted the idea of shared interests and cooperation between the US and Europe. The USSR declined to participate in the Marshall Plan, and discouraged eastern European states in its sphere of influence from receiving American economic assistance.

ZOHRAN MAMDANI'S WIN, AT A TIME WHEN THE MIGRANT IS UNDER SIEGE IN US, IS HEARTENING

In America, the barriers to entry in politics can seem impossibly high. There are questions of how to raise funding, find political connections and, for minorities and migrants, the challenge of appealing to voters who don't look, talk or worship as they do. Zohran Mamdani, the Democratic nominee for mayor of New York and a state representative, was an underdog when he threw his hat into the primary ring against party stalwarts like former NY Governor Andrew Cuomo. If he wins the election, Mamdani will be the first Muslim and person of Indian descent to become mayor of America's first city. His campaign holds lessons in political communication that liberal politicians might want to heed.

Two of the simplest questions asked of politicians are often the most difficult: What do you stand for? What will you do for me (the voter)? Mamdani, at 33, has been a social democrat through his brief political career: His record is not marked by the compromises that seasoned politicians are forced into. He has made his stand on Israel's aggression in Gaza clear and asserted that anti-Zionism is not anti-semitism. His promises were criticised as idealistic and populist (free bus rides and childcare, for example) by his detractors but were appreciated by many primary voters caught in a cost-of-living crisis. What has stood out most is Mamdani's political communication: On social media, his videos were less slick and seemingly more authentic than his counterparts. He leaned into his Muslim and Indian heritage, speaking in Hindi and Bengali. His show of affection for his mother, filmmaker Mira Nair, in his moment of triumph, struck a warm, human note.

At a time when the migrant is under siege, Mamdani shows there are many ways of being American. The election in November will be a hard-fought one. But the lesson for left-liberals is that, to beat the odds, it's better to persuade the gallery than play to it.



STRATEGIC MISFIRE

The 12-day war between Iran and Israel ended with a tense ceasefire. Israel claims that it has set back Iran's nuclear programme by years in a 'historic victory'. But the reality appears to be more complex. Iran has suffered enormous damage — its key nuclear facilities were attacked, much of its top chain command was eliminated, and its air defences proved virtually ineffective. More than 600 people, mostly civilians, were killed. It will take years, if not decades, for Iran to rebuild what it has lost. Yet, victories and defeats in wars are not measured by material losses alone. Despite the losses and a clear power imbalance, Tehran has refused to capitulate. Its government recovered swiftly from the initial shock of June 13, and its sustained retaliatory campaign of ballistic missile and drone attacks exposed vulnerabilities in Israel's vaunted multilayered air defence system; there were deaths. Prime Minister Benjamin Netanyahu, who claimed early that his campaign could lead to regime change in Iran, was eventually forced to accept a ceasefire, after the U.S. struck Iran's nuclear plants. U.S. President Donald Trump, who had demanded Tehran's "unconditional surrender", announced de-escalation after Iran carried out a symbolic strike on American bases in Qatar and Iraq on Monday night.

The war could have far-reaching implications for the regional order. Iran has reasserted itself as a counterbalance to Israel in an otherwise unipolar West Asia. Tehran is likely to rebuild its conventional arsenal, bolster relationships with Russia and China and reset ties in the region. On the other side, Israel's over-reliance on the U.S. was again laid bare when faced with major conventional challenges. When it launched the war, it knew that it would not be able to destroy Iran's nuclear facilities on its own. The U.S., which was participating in the defence of Israel by intercepting Iranian projectiles, joined in, giving Tel Aviv an exit strategy. But the U.S., which has burnt its fingers in Afghanistan, Iraq and Libya, did not want to get entangled in another forever war. This left Mr. Netanyahu with no other option but to accept a ceasefire with the regime he wanted to overthrow. U.S. intelligence agencies assess that the Iranian nuclear programme has been set back by only a few months. In effect, the war failed to deliver its objective and has brought the situation full circle: the urgent need for a diplomatic solution. For diplomacy to succeed, the U.S. must engage in serious talks with credible promises of economic benefits for Iran in return for accepting long-term, verifiable limits on its nuclear programme. Second, Washington must rein in Israel. As long as its closest ally continues to bomb its enemies with impunity, order and stability will remain out of reach for West Asia.

U.S.'S HEAVY DUTY ATTACK ON IRAN'S NUKE SITES

The story so far:

On June 21, U.S. President Donald Trump announced that the U.S. military carried out precision strikes on three key Iranian nuclear facilities, mainly Fordow, Natanz and Isfahan. He further stated that the strikes were a "spectacular" military success and that Iran's key nuclear enrichment facilities have been "completely and totally obliterated". The key part of these strikes were conducted by the B-2 Spirit stealth bombers which dropped GBU-57 bunker busters to penetrate the Fordow enrichment facility located deep inside a mountain, that was beyond the capability of Israel. Later on Sunday, U.S. Secretary of Defence Pete Hegseth and Gen. Dan Caine, Chairman of the Joint Chiefs of Staff detailed the strikes carried out by the U.S. Central Command (Centcom) under 'Operation Midnight Hammer'.



How were the strikes carried out?

After proceeding quietly and with minimal communication for 18 hours from the U.S. to the target area, the first of the seven B-2 Spirit stealth bombers dropped two 30,000 lb GBU-57 Massive Ordnance Penetrator (MOP) 'bunker buster' bombs at the Fordow site at approximately 6:40 p.m. EDT, Gen. Caine told media houses. The initial mission package also included several decoy aircraft that flew west over the Pacific Ocean as "a deception effort known only to an extremely small number of planners and key leaders here in Washington," he stated.

"The U.S. employed several deception tactics — including decoys — as the fourth and fifth generation aircraft pushed out in front of the strike package at high altitude and high speed, sweeping in front of the package for enemy fighters and surface-to-air missile threats", according to Gen. Caine. "Following the initial strike on Fordow, the remaining B-2s went on to deploy their ordnance, eventually totalling 14 MOPs hitting the targeted areas," he said noting that this was the first operational use of the GBU-57 MOP.

In addition to the MOPs, a U.S. submarine launched more than two dozen Tomahawk land attack cruise missiles at key infrastructure targets at the Isfahan site, bringing the overall total of precision-guided weapons employed during the operation to approximately 75. "Initial battle damage assessments indicate that all three sites sustained extremely severe damage and destruction," Gen. Caine stated, although later in the day several U.S. officials expressed doubts on the extent of damage to the Fordow facility.

What is a B-2 stealth bomber?

The U.S. Air Force (USAF) operates the country's bomber fleet which consists of 114 B-1 Lancers, 21 B-2 Spirit and 137 legacy B-52 aircraft. Of these, B-2 is the only fully stealth aircraft while the B-1 has some stealth features. Each B-2 costs over \$2 billion, the most expensive aircraft ever, and so only 21 aircraft were built. One B-2 crashed in 2008 while another was damaged in 2022, and with the repair work deemed prohibitive, it is set to be retired soon. This leaves only 19 B-2 aircraft in active inventory.

The B-2 has always inspired awe with its bat-like shape, and has been extensively showcased by Hollywood. It is a dual-capable multi-role heavy bomber, powered by four engines. According to the USAF, the B-2's low observability is derived from a combination of reduced infrared, acoustic, electromagnetic, visual and radar signatures. "These signatures make it difficult for sophisticated defensive systems to detect, track and engage the B-2," the USAF states. The B-2 made its first flight in 1989 and began operations in 1997. With a crew of two, it can carry a payload of 40,000 lb, has an un-refuelled range of 6,000 miles and a service ceiling of 50,000 feet. It is 69 feet long, 17 feet high and has a wingspan of 172 feet, half the length of a football field.

For Sunday's mission, the B-2s flew 37-hours non-stop, from their home base to the target location and back, re-fuelling several times mid-air, making it the second longest mission ever. The B-2s hold the record for the longest air combat mission in history. As per its manufacturer Northrop Grumman, in 2001, six B-2s were the first to enter Afghan airspace for a record setting 44-hour mission. According to an article in the New York Post, the B-2 pilots "have their cockpits outfitted with mini refrigerators and a microwave oven to keep their crew fed and alert" and also have a toilet and enough space for one person to lay down and rest.

A March 2025 report of the U.S. Congressional Research Service (CRS) states that the USAF continues to modernise the B-2. Northrop Grumman was awarded a contract in 2024 of up to \$7



billion to maintain and improve B-2 stealth and communications capabilities, engines, and displays through 2029.

The B-2s are extremely maintenance intensive. According to a detailed account in The Atlantic on the B-2s employed in Libya in 2018, 100 hours of maintenance were required for every hour of flight. This is mainly because the advantage of stealth is B-2's edge, and it is achieved by design and radar-absorbing materials. To maintain them, the aircraft needs temperature controlled hangers to protect against changes in temperature, humidity, and dust.

Why was there a need for 'bunker-busters'?

The nuclear fuel enrichment site at Fordow is located 60 miles south of Iran's capital Tehran in the mountainous region close to the city of Qom. The facilities are buried deep underground, estimated to be 80-90m deep, to withstand Israeli airstrikes. Iran acknowledged its existence only in 2009. That's why there was a need for the GBU-57 MOP and the B-2 Spirit that can carry it. It also meant that the U.S. had to officially enter the Israel-Iran conflict which began on June 13, when Israel started bombing Iranian nuclear and military facilities.

The GBU-57 MOP, according to the USAF is a weapon system designed "to accomplish a difficult, complicated mission of reaching and destroying our adversaries' weapons of mass destruction located in well protected facilities." It is more powerful than its predecessor, the BLU-109 and the GBU-28. According to USAF, a total of 20 MOPs were contracted. The B-2 Spirit is the only aircraft in the USAF capable of employing the 20.5 ft, 30,000 lb MOP which is guided by GPS to reach and destroy targets. Given the weight, each B-2 can hold two MOP bombs.

According to a 2012 CRS report, the GB-57 has a penetration capability of up to 200 feet underground before exploding. "By some reports, it was expected to penetrate as much as 200 feet through 5,000 psi reinforced concrete, and 25 feet into 10,000 psi reinforced concrete," it states. The New York Times quoted a senior U.S. official who stated that the strike on the Fordow site did not destroy the heavily fortified facility but has severely damaged it, taking it "off the table." The person noted that even 12 bunker-busting bombs could not destroy the site.

What next?

This mission was not, and has not been, about regime change, Mr. Hegseth said. "The president authorised a precision operation to neutralise the threats to our national interests posed by the Iranian nuclear program and [in support of] the collective self-defense of our troops and our ally, Israel." However, it is unclear whether the objectives of fully neutralising the nuclear enrichment facilities of Iran has been accomplished. Moreover, the whereabouts of the enriched uranium are unknown, as per U.S. officials.

A next generation bomber, the B-21 Raider, a dual-capable penetrating-strike stealth bomber, is currently under development. The B-21 is similar to the B-2, but slightly smaller, with a distinctive beak domed centre. According to a USAF fact sheet, the B-21 has been designed with an open systems architecture to allow for faster new software integration. With a plan to make them enter service in the next few years, the USAF is looking at acquiring a minimum of 100 aircraft at an average unit procurement cost of \$550 million.



IRAN HAS A PLETHORA OF OPTIONS IT CAN PICK FROM IN RESPONSE TO U.S. STRIKES

Iran has spent decades building multi-tiered military capabilities at home and across the region that were at least partly aimed at deterring the United States from attacking it. By entering Israel's war, the U.S. may have removed the last rationale for holding them in reserve.

This could mean a wave of attacks on U.S. forces in West Asia, an attempt to close a key bottleneck for global oil supplies, or a dash to develop a nuclear weapon with what remains of Iran's disputed programme after American strikes on three key sites.

A decision to retaliate against the U.S. and its regional allies would give Iran a far larger target bank and one that is much closer than Israel, allowing it to potentially use its missiles and drones to greater effect. The U.S. and Israel have far superior capabilities, but those have not always proven decisive in America's recent history of military interventions in the region.

Ever since Israel started the war with a surprise bombardment of Iran's military and nuclear sites on June 13, Iranian officials from the supreme leader on down have warned the U.S. to stay out, saying it would have dire consequences for the entire region.

It should soon be clear whether those were empty threats or a grim forecast.

Iran's next move

The Strait of Hormuz is the narrow mouth of the Persian Gulf, through which some 20% of all oil traded globally passes, and at its narrowest point, it is just 33 km wide. Any disruption there could send oil prices soaring worldwide and hit American pocketbooks.

Iran boasts a fleet of fast-attack boats and thousands of naval mines that could potentially make the Strait impassable, at least for a time. It could also fire missiles from its long Persian Gulf shore, as its allies, Yemen's Houthi rebels, have done in the Red Sea.

The U.S., with its 5th Fleet stationed in nearby Bahrain, has long pledged to uphold freedom of navigation in the Strait and would respond with far superior forces. But even a relatively brief firefight could paralyse shipping traffic and spook investors, causing oil prices to spike and generating international pressure for a ceasefire.

The U.S. has tens of thousands of troops stationed in the region, including at permanent bases in Kuwait, Bahrain, Qatar, the UAE — Arab Gulf countries just across the Persian Gulf from Iran, and much closer than Israel.

Those bases boast the same kinds of sophisticated air defences as Israel, but would have much less warning time before waves of missiles or swarms of armed drones. And even Israel, which is several hundred kilometres further away, has been unable to stop all of the incoming fire.

Iran could also choose to attack key oil and gas facilities in those countries with the goal of exacting a higher price for U.S. involvement in the war. A drone attack on two major oil sites in Saudi Arabia in 2019 — claimed by the Houthis but widely blamed on Iran — briefly cut the kingdom's oil production in half.

Iran's so-called Axis of Resistance — a network of militant groups across West Asia — is a shadow of what it was before the war ignited by Hamas's October 7, 2023, attack on Israel out of the Gaza Strip — but it still has some formidable capabilities.



Israel's 20-month war in Gaza has severely diminished the Palestinian Hamas and Islamic Jihad groups, and Israel mauled Lebanon's Hezbollah last fall, killing most of its top leadership and devastating much of southern Lebanon, making its involvement unlikely.

But Iran could still call on the Houthis, who had threatened to resume their attacks in the Red Sea if the U.S. entered the war, and allied militias in Iraq. Both have drone and missile capabilities that would allow them to target the U.S. and its allies.

Iran could also seek to respond through militant attacks further afield, as it is widely accused of doing in the 1990s with an attack on a Jewish community centre in Argentina that was blamed on Iran and Hezbollah.

It could be days or weeks before the full impact of the U.S. strikes on Iran's nuclear sites is known.

But experts have long warned that even joint U.S. and Israeli strikes would only delay Iran's ability to develop a weapon, not eliminate it. That's because Iran has dispersed its programme across the country to several sites.

Iran would likely struggle to repair or reconstitute its nuclear programme while Israeli and U.S. warplanes are circling overhead. But it could still decide to fully end its cooperation with the International Atomic Energy Agency (IAEA) and abandon the Nuclear Non-Proliferation Treaty.

North Korea announced its withdrawal from the treaty in 2003 and tested a nuclear weapon three years later, but it had the freedom to develop its programme without punishing airstrikes.

Iran insists its programme is peaceful, though it is the only non-nuclear-armed state to enrich uranium up to 60%, a short step away from weapons-grade levels of 90%.

U.S. intelligence agencies and the IAEA assess that Iran has not had an organised military nuclear programme since 2003.

Israel is widely believed to be the only nuclear-armed state in the West Asia but does not acknowledge having such weapons.

IF ENRICHED URANIUM PERSISTS DESPITE U.S. STRIKES, IRAN'S NUCLEAR OPTION PERSISTS TOO

After its recent airstrikes against Iran's facilities in Fordo, Natanz, and Isfahan, the U.S. has been claiming it has set back the Islamic Republic's nuclear weapons ambitions by decades and nullified the country's ability to make a nuclear weapon of mass destruction (WMD).

The question of whether Iran actually has nuclear weapons is important because of the U.S.'s history of attempts to force regime changes in foreign countries on the pretext of threats they pose, including with WMDs. Iran currently doesn't have a nuclear weapon — but that may not be the only important question.

Doubts remain in the global arms control community over whether U.S. bombs — including the "bunker buster" massive ordinance penetrators (MOPs) designed to destroy subsurface structures — were able to damage subterranean enrichment facilities at Natanz and Fordo and Iran's stockpile of 60% enriched uranium.



The latter is of particular interest. Its existence, which the International Atomic Energy Agency (IAEA) estimated amounted to 400 kg in May, allows Iran to enrich it further to weapons-grade uranium in a matter of days, reducing the 'breakout' time within which it can be ready with a nuclear warhead.

Using high-resolution satellite data provided by private operators like Maxar, experts have spotted trucks moving in and out of the Fordo facility in the days leading up to the bombing. They have interpreted this to mean Tehran may have anticipated the bombs, including the use of MOPs, and moved fissile material and equipment away to safer locales.

'Largely intact'

Indeed, Financial Times reported on June 26 that "preliminary intelligence assessments" shared with European governments suggest Iran's 60% enriched stockpile survived the U.S. strikes "largely intact" and that it wasn't "concentrated" in Fordo when the bombs fell.

In posts on X.com, Jeffrey Lewis, director of the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation Studies in California, among others also discussed satellite images showing signs of special tunnels where Iran may have moved its enriched stockpile for safekeeping.

Thus, questions linger about the extent to which the American and Israeli bombing set Iran's nuclear weapons programme back. While estimates of the damage wrought by American bombs vary, that the Iranian nuclear programme was set back at all isn't in dispute. But as Carnegie Nuclear Policy Program co-director James Acton has contended, this is separate from the question of whether Iran can build a nuclear weapon now. It can if it has access to the 60% enriched stockpile, other enrichment facilities the world doesn't know about (the IAEA has deemed this likely), and/or the ability to operationalise new enrichment centres.

If the 60% enriched stockpile persists, the nuclear option also persists. In fact Israel's actions and statements in the last month and U.S. involvement in its war are expected to galvanise local support for the nuclear weapons programme and strengthen Tehran's resolve.

With regards to the risk of proliferation as well as what former Indian Ambassador Mahesh Sachdev has called the "geopolitical entropy" slowly unfolding in West Asia, an equal question is whether Iran has the intention to develop nuclear weapons.

Technical knowhow

As things stand, Iran has amassed both the technical knowhow and the materials required to make a nuclear weapon. Second, the Israelis and the Americans have failed to deprive Iran of these resources in their latest salvo.

In fact, the airstrikes against Iran from June 13 cast Tehran as the victim of foreign aggression and increased the premium on its option to withdraw from the Non-Proliferation Treaty (NPT) without significant international censure. Iran's Parliament has also passed a resolution to suspend its cooperation with the IAEA after having accused the agency of leaking sensitive information to facilitate Israel's targeted strikes.

The international community is already wary of the possibility of a proliferation cascade in the region. It is an openly acknowledged fact that Israel possesses nuclear weapons. It isn't party to the NPT either. Saudi Arabia has said it will pursue a weapon of its own if Iran has one, as might



Turkey. Former U.S. State Department members Mark Goodman and Mark Fitzpatrick have written that this situation is reminiscent of that in the Korean Peninsula, where North Korea's withdrawal from the NPT in 2003 forced South Korea and Japan to reconsider their own options.

In the right conditions, highly enriched uranium (HEU) can retain its quality for several decades. Modern equipment stores uranium in inert cladding and sealed containers devoid of any moisture, with periodic surveillance and maintenance to keep the cores within their original specifications. Even the decay heat of HEU is only around 1 mW/kg, entailing virtually no thermal or radiation damage to the surrounding components.

Use cases of HEU

While Tehran's refusal to cooperate with the IAEA is suggestive, it hasn't explicitly articulated that it will pursue nuclear weapons. In fact, since the 1960s until the U.S. unilaterally pulled out of the Iran nuclear deal in 2018, Tehran has maintained its right to the peaceful use of nuclear energy alone.

But the presence of large quantities of HEU in the stockpile is intriguing.

From a purely technical standpoint, the HEU can still be diverted for non-military applications. For example it can be used in a pilot enrichment cascade to study and develop nuclear reactors for naval use. At 60% enrichment, the same fissile inventory will also fit in a third of the total mass, requiring fewer cylinders to store and transport. But these are niche use-cases.

Energy- and cost-wise, enriching uranium to 60% and then down-blending it to low-enriched uranium (LEU) required to run nuclear power plants is irrational. A 60% stockpile can be blended on demand to 19.75%, 5% or 3% uranium without spinning centrifuges — but it can also be achieved by blending 20% uranium with natural or depleted feed, so there is no real advantage. Likewise, down-conversion and routine safeguards can handle large volumes easily, precluding a need to reduce the number of containers.

If anything, the HEU stockpile, the technical knowhow in the country, the absence of a nuclear warhead per se, and the sympathy created by the bombing allow Tehran a perfect bargaining chip: to simultaneously be in a state of pre-breakout readiness while being able to claim in earnest that it is interested in nuclear energy for peace. What this Schrodinger's cat will look like when the box is opened is perhaps the next question.

ISRAEL HAS SHARED A 'SPECIAL RELATIONSHIP' WITH THE U.S. AS AN INDISPENSABLE ALLY FOR MOST OF ITS HISTORY

Israel started bombing Iran on June 13, three days ahead of a scheduled meeting between American and Iranian negotiators. They had already held five rounds of talks and U.S. President Donald Trump had said he wanted a deal with Iran over the country's nuclear programme. The Israeli attack practically derailed Mr. Trump's diplomatic push. Yet, he welcomed the Israeli strike, and demanded "unconditional surrender" from Iran. Within a week, as Israel was struggling to intercept ballistic missiles from Iran, Mr. Trump, who built his political base railing against America's wars in the past, took the U.S. to war in Iran. American B-2 bombers and missiles struck three Iranian nuclear facilities — Fordow, Natanz and Isfahan — despite opposition from Mr. Trump's political base. This is not surprising given the history of the U.S.-Israel relations. Throughout Israel's war in Gaza, which was triggered by Hamas's October 7, 2023 attack, the U.S., under both Biden and Trump administrations, stood solidly behind the Jewish nation. And this has

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



been a consistent policy of the U.S. administrations, at least since 1967. What explains this relationship?

The U.S. had supported the idea of a Jewish homeland even before the state of Israel was declared within historical Palestine in 1948.

The origins

On March 3, 1919, two years after the Balfour Declaration, in which the British government declared its support for the creation of a “Jewish homeland in Palestine”, then U.S. President Woodrow Wilson said, “The allied nations with the fullest concurrence of our government and people are agreed that in Palestine shall be laid the foundations of a Jewish Commonwealth.” In 1922 and 1944, the U.S. Congress passed resolutions endorsing the Balfour Declaration. The U.S. was the first country that recognised Israel in 1948.

However, the initial two decades of their relationship had not been very smooth. The Eisenhower administration was unhappy when Israel, along with France and Britain, launched the Suez War in 1956. Washington threatened to cut aid to Israel if it did not withdraw from the territories it had captured. Similarly, in the 1960s, the Kennedy administration had voiced concerns about Israel’s secret nuclear programme.

However the 1967 war, in which Israel defeated Jordan, Syria and Egypt, all in six days, and captured swathes of territories, brought in a paradigm shift in the way Washington looked at the Jewish state. Two of the Arab countries that Israel defeated — Egypt and Syria — were Soviet allies. From then on, the U.S. started seeing Israel as a stable ally who can check the expansion of Soviet influence in West Asia.

Today, Israel is an exceptional ally of Washington. The U.S. offers practically unconditional financial, military and political support for Israel. The Jewish nation is an undeclared nuclear power but has never faced any global scrutiny or pushback, thanks to the protection offered by the U.S. Israel is also the largest recipient of America’s aid.

The U.S. is also Israel’s largest trading partner. Both Israel and the U.S. also have a deep defence partnership, which involves joint research and development and weapons production.

Since 1972, the U.S. has used its veto power over 50 times to strike down resolutions critical of Israel in the UN Security Council.

From the 1973 Yom Kippur war, the U.S. has also offered solid military support to Israel. In 1973, after Israel was taken aback by a surprise attack by Egypt and Syria, U.S. supplies proved vital for Israel to push back the enemy troops from the occupied Golan Heights and Sinai Peninsula. In 1982, the U.S. sent Multinational Forces to Lebanon after Israel’s invasion of the country.

After the first intifada, the U.S. supported the Oslo process and the two-state solution, but without compromising its relationship with Israel.

Now, the running theme in Washington (and other Western capitals) is that it supports “Israel’s right to defend”. The previous Trump administration recognised Jerusalem as Israel’s capital and moved America’s embassy to the disputed city. The Trump administration also recognised Israel’s annexation of Golan Heights, a Syrian territory it captured in 1967 and held under its occupation ever since. The U.S. continued to supply weapons to Israel after October 7 even as Israel faced allegations of genocide. The U.S. rushed to Israel’s defence in 2024 when Iran launched drones



and ballistic missiles in response to Israel's attack. And now, the U.S. has directly joined the war Israel began against Iran.

Special relationship

While there were personality clashes between American Presidents and Israeli Prime Ministers, such clashes never led to a breakdown in what President John F. Kennedy called "the special relationship". In the 1970s, President Jimmy Carter heaped pressure on Israel to make peace with Egypt and give concessions to the Palestinians. Israel would finally agree to sign the Framework for Peace Agreement as part of the Camp David Accords, which would set the stage for the Oslo process. During the second intifada, President George W. Bush pressed Israel to show restraint in the occupied West Bank. In 2002, Mr. Bush asked Israel to pull back from the West Bank and end a military operation "without delay", but the Israelis never obliged. Ariel Sharon had Bush "wrapped around his little finger", Brent Scowcroft, the former National Security Adviser, said in October 2004. President Barack Obama and Israeli Prime Minister Benjamin Netanyahu had clashed over the 2015 Iran nuclear deal. Mr. Netanyahu had visited the Republican-controlled U.S. Congress and attacked Mr. Obama over his Iran policy. But the same Mr. Obama vetoed all resolutions at the UN Security Council critical of Israel except one. The Biden administration had earlier criticised the Netanyahu government's plan to overhaul the country's judiciary. But after the October 7 attack by Hamas, the U.S. has thrown its full weight behind the Netanyahu government's war on Gaza. Mr. Trump seems to have thrown his full weight behind Israel.

Power of lobby

Why does the U.S. always back Israel? One explanation is that Israel's strategic value in a volatile yet critical region makes it appealing for Washington. During the Cold War, the U.S. saw Israel as a powerful bulwark against possible Soviet expansion in the Arab world. After the Cold War, when the U.S. started becoming more and more involved in West Asia, it continued to see Israel as a force of stability.

Strategic value explains a close partnership or alliance, such as America's relationships with Japan, South Korea or Germany. A host of other factors, including America's public opinion, electoral politics and the powerful Israel lobby in the U.S., play a role in shaping the country's Israel policy.

Historically, Israel has enjoyed near unanimous support in the U.S. Congress, and a vast majority of Americans have favourable views about Israel. American Jews and evangelical Christians are two powerful, politically active groups in the U.S. They are important constituencies for both parties and they are both pro-Israel. Then there's a powerful Israel lobby in the U.S., which according to John Mearsheimer and Stephen Walt, heavily influences U.S. policy towards Israel. The lobby helps amplify pro-Israel voices, backs pro-Israel politicians and works toward playing down or neutralising voices critical of Israel, they argue in their 2006 essay "The Israel lobby", in London Review of Books.

The American Israel Public Affairs Committee (AIPAC), a powerful pro-Israel lobbying group, hosts top leaders from both countries, including Presidents, Senators and Prime Ministers, for its annual gatherings. Pro-Israel groups also support both parties in the U.S. financially. Besides, there are strong ties between the military industrial complexes of both countries.

Therefore, all these factors together — Israel's strategic value, America's domestic politics, the presence of the pro-Israel lobby and military-industrial interplay, make sure that there's an institutional consensus in the U.S. about its relationship with Israel.



FOR THE SAKE OF PEACE, AT THE COST OF WAR

Through history, Iran's relationship with nuclear weapons has had four phases. In the first it was a model state. When the UN opened the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) for signatures on July 1, 1968, Shah Reza Pahlavi signed it on the first day and ratified it two years later as part of his efforts to increase access to nuclear power in Iran under the White Revolution.

Until the late 1970s, Iran enjoyed a good reputation under the NPT by furthering its goals to restrict the use of nuclear energy for peaceful purposes. Then the Islamic Revolution toppled the Shah in 1979 and the Ayatollah assumed supreme power in the new Islamic Republic. This launched the second phase, more like several phases of ambiguity, lasting from 1979 until 2002. The driving concern in these periods was whether Iran would build nuclear weapons. Will it? Won't it?

While Ayatollah Khomeini had been ambivalent towards nuclear weapons, Saddam Hussein's use of chemical weapons during the Iran-Iraq war spurred him to reconsider his deterrence strategy. Thus, until the early 2000s, there were indications that Iran was amassing technical know-how of nuclear weapons but no overt signs that it was actually building one.

But then in 2002, a group of dissidents called the National Council of Resistance revealed to the world that Iran had been secretly pursuing a nuclear weapons programme for at least two decades in the form of a nuclear enrichment facility in Natanz and a facility to produce heavy water in Arak. Since Iran had not declared the existence of these facilities under the NPT, it became persona non grata under the treaty.

The incident effectively launched the third phase in 2005, when inspectors of the UN International Atomic Energy Agency (IAEA) said Iran was not complying with its obligations to report evidence of past weapons-related activities. This was also a diplomatic failure since Iran had signed its Additional Protocol with France, Germany, and the U.K. in 2003 to allow more intrusive inspections of its facilities in exchange for diplomatic support and cooperation in multilateral fora. But in 2006, Iran said it would stop implementing the Protocol over frustration that its assurances were not being taken seriously.

The IAEA's conclusion invited the UN Security Council to launch punishing sanctions from 2006 to 2014. This period also coincided with the rule of Iran's hardline President Mahmoud Ahmadinejad, who doubled down on what he called Iran's right to enrich uranium for civilian use even as he contended with a national economy significantly weakened by the sanctions. It was not until Hassan Rouhani succeeded him in 2013 that Iran indicated its willingness to return to the negotiating table in return for sanctions relief.

The result was the historic Joint Comprehensive Plan of Action (JCPOA) agreement between Iran and the P5+1 group in 2015. Although it imposed a slew of restrictions on Iran that took the Islamic nation far beyond its obligations under the NPT — which was still in effect — Iran complied in exchange for lifting the sanctions. In fact in many respects Iran returned to being a model state, serving a reminder that rational diplomacy à la the NPT during the Cold War could achieve non-proliferation. But all of this came to nought for reasons that are hard to understand, but increasingly tempting to guess at, when in 2018 the new U.S. President Donald Trump unilaterally withdrew from the JCPOA and restored "maximum pressure" sanctions.



Iran responded at first by resorting to what it said were mechanisms under the deal that allowed it to disobey enrichment limits when resolving disputes. But, by 2022, Iran had blown past its JCPOA safeguards when it became clear it had enriched uranium to within a hair's breadth from the level required to make an atomic weapon. Should Iran exit the NPT by coming in possession of such a warhead, it could spark a regional arms race and strike a profound blow to the treaty's credibility. West Asian states such as Saudi Arabia may be compelled to seek nuclear weapons of their own.

Earlier this month, Israel launched air strikes against Iran's nuclear establishment as part of its insistence that Iran must never possess nuclear weapons while also touting its "right to self-defence". It had the U.S.'s backing under the returning Trump administration. Russia and China have demanded stronger sanctions while denouncing Israel. European nations have refused unilateral military action fearing the collapse of the non-proliferation regime itself. Their fear is not unwarranted: Article X of the NPT gives Iran the right to withdraw citing "extraordinary events" that jeopardise its interests, grounds for which Israel's aggression has now created.

Iran's twisting relationship with the NPT over the years has been a roller coaster of compliance and contention. While it long proclaimed adherence to the treaty's basic tenets and benefited from them vis-à-vis civilian nuclear technology, its covert activities in violation of the NPT's safeguards progressively undermined trust and led to an international crisis that is still unfolding.

Evolving perspectives

Both the IAEA's and the Security Council's evolving perspectives in this time echo the international community's split approaches towards Iran: pressure versus engagement. Nonetheless, the major powers agree on one point: Iran must not be allowed to obtain nuclear weapons. President Masoud Pezeshkian has also said Tehran is not seeking them but as long as Israel's campaign continues, Iran's path to diplomacy is blocked and it will keep one hand on the nuclear option.

The situation today remains fluid and dangerous. Iran has advanced its nuclear capability to an unprecedented degree while still officially forswearing nuclear arms. The coming months will determine whether a new diplomatic understanding can be reached to bring Iran back into fuller compliance, and thus ease sanctions, or whether the NPT itself will be tested by a potential withdrawal. Since Iran has repeatedly asserted its right under the treaty to the peaceful use of nuclear energy, the U.S. had previously proposed in the Oman talks to set up a low-enrichment facility in a third country to supply just the reactor fuel to Iran. Israel's onslaught has left these talks in a limbo, however.

International monitors have stressed that should Israel continue its bombing, which seems likely, the world may face either a nuclear-armed Iran or a war to prevent it. This is unfortunate because the NPT was created to prevent just these outcomes.

WHEN A NUCLEAR SITE IS ATTACKED

Nuclear facilities, by their very nature, store a lot of radioactive substances. These substances are stored in carefully designed containers and the facilities are constructed in ways to minimise the risk of leaks. An attack can disrupt these safety mechanisms.

- The United States attacked three key nuclear installations in Iran on Sunday morning (June 22), with President Donald Trump claiming that all the three facilities had been "completely and totally obliterated." The US attacks follow a series of missile strikes by Israel last week, also targeting

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Iran's nuclear installations, most notably Natanz, which was a target of Sunday's US bombing as well.

- Sunday's attacks targeted Fordow, Isfahan and Natanz nuclear facilities, all of them key uranium enrichment sites that house the infrastructure to convert natural uranium into highly-enriched uranium (HEU) that can potentially be used to make a nuclear bomb.
- The attacks have led to fears of a major nuclear disaster, in the form of nuclear explosion, or at least largescale nuclear radiation leaks. However, an explosion is not expected under these circumstances, and thankfully, no major radiation leak has been detected so far.

Do You Know:

- Enrichment is the process of increasing the concentration of Uranium-235 (U235) in a sample of natural uranium which is primarily — more than 99 per cent — Uranium-238 (U238). It is only U-235 that is fissile, meaning its nucleus is susceptible to being broken (fissionable) through a process that produces energy, and is capable of sustaining a chain reaction. An enrichment of 3-5 per cent is adequate for producing electricity in nuclear power stations, but for making nuclear weapons, HEU, which has concentrations of 90 per cent or more of U235, is required.
- The International Atomic Energy Agency (IAEA), the global nuclear watchdog, said it had not seen any increase in 'off-site radiation levels' following Sunday's attacks. Iran has also said that there was no risk to public health because of the attacks.
- A nuclear bomb is very different from the traditional explosives and chemicals used in warfare. Traditional bombs use a variety of chemicals that are generally designed to explode on impact, like when they are dropped. These chemical explosives can go off in other circumstances as well, like when they are exposed to heat or friction. These are explosive in themselves, and can get triggered and cause damage even when they are not used in the way they are designed to. Specifically, stored chemical explosives can lead to blasts when these are struck by other weapons.
- Nuclear weapons, or nuclear material, do not behave like that. A nuclear bomb causes damage not by exploding the way traditional bombs do, but by releasing very high amounts of energy in a very short span of time. This large amount of energy sets off a series of processes that cause widespread damage.
- Nuclear weapons are designed to detonate mid-air, not on impact like traditional explosives. They release a massive amount of energy in a few milliseconds, which heats up the surrounding air to millions of degrees Celsius, leading to the formation of what are known as blast waves, an expanding bubble of extremely hot air. Most of the damage is caused by these blast waves.

PAKISTAN'S ROLE IN THE U.S.-WEST ASIA CALCULUS

On June 22, U.S. President Donald Trump announced that the U.S. had conducted military strikes against three Iranian nuclear installations. This is a momentous event, the outcome of which could change the shape of West Asia for decades to come.

Previous western interventions in Iraq (1992 and 2002), and in Libya (2011), saw quick military outcomes, but long term destabilisation of the countries.

Mr. Trump warned of 'far greater' attacks in the future if Iran does not 'make peace'. Iranian Foreign Minister Abbas Araqchi has said that "Iran reserves all options to defend its sovereignty,

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interests and people". Will this then be a long drawn-out war? How will it impact the situation in the sub-continent, as the U.S. strike was preceded by Pakistan's Chief of Army Staff General Munir's meeting with President Trump. The general, who got himself promoted to Field Marshal only recently, arrived in Washington soon after Israel began its attack on June 13.

U.S. interests'

General Asim Munir's private lunch with Mr. Trump at the White House on June 18 was an unprecedented departure from protocol. Normally, heads of states or governments have to vie for this honour. While the meeting was projected by both sides in the sub-continent's context, this makes little sense as India-Pakistan hostilities came to an end a month ago. There was no urgency to demand the U.S. President's attention.

Earlier in June, Pakistan was praised in a Senate hearing by General Michael Kurilla, the head of the U.S. Central Command (CENTCOM). He praised Pakistan's 'value as a partner' in countering terrorism and mentioned its role in the arrest and extradition of Mohd. Sharifullah, accused of killing 13 U.S. soldiers, who were deployed during the U.S. evacuation from Afghanistan, at Kabul airport on August 26, 2021.

This was a curious statement considering that Pakistan undermined the two decade-long U.S. effort to stabilise Afghanistan despite receiving \$20 billion as U.S. assistance during the period. Imran Khan, the then Pakistan prime minister gloated over the U.S.'s humiliating withdrawal and said that 'shackles of slavery' had been broken. It is unlikely that the CENTCOM chief had forgotten such recent history, and therefore one needs to understand what exactly led to the sudden change in the U.S.'s position.

For the U.S., West Asia is far more important than South Asia. Though America is no longer dependent on oil imports from the Gulf, it has large economic stakes there. During his recent visit to the region, Mr. Trump extracted more than \$3 trillion worth of commitments in investment in the U.S. from Gulf monarchies. The security of Israel is also deeply enmeshed in American politics. The focus of the CENTCOM chief's testimony was not South Asia, but the situation in the West Asian region and how to deter Iran.

Pakistan-Iran relations

Pakistan has a complex relationship with Iran. The two countries compete for influence in Afghanistan. Pakistan takes pride in being the only Muslim majority state possessing nuclear weapons, and it does not like the idea of losing that status. There have also been attacks on Iranian security personnel by groups based in Pakistan. This had triggered missile exchanges between the two countries in 2024.

Pakistan can play a role in isolating Iran in case of a conflict with Israel. Iran depends on imports for most of its food requirements, and therefore trade routes via land are important in case conflict in the region leads to a closing of ports along the Persian Gulf. There are five trading posts on the Iran-Pakistan border. Besides, there is smuggling of petrol and diesel from Iran to the Pakistani side of the border.

Iran also supplies electricity for the Gwadar port situated in Pakistan's Balochistan province.

On June 15, Pakistan announced — around the time General Munir arrived in Washington — the closure of its land borders with Iran, except for the return of Pakistani nationals. In 1965, Iran



under the Shah regime had provided sanctuary to the Pakistan Air Force. And now, Pakistan has slammed the door shut in Iran's face.

The understanding between Pakistan and the Trump administration was probably in the works for some time. It may be recalled that Pakistan received a fresh commitment of \$1.4 billion under the climate resilience program of the International Monetary Fund (IMF) in the midst of recent hostilities with India. This was in addition to the release of \$1 billion under the existing commitment of \$7 billion from the IMF as the nation faces a desperate economic situation. President Trump's intervention also helped Pakistan when Indian armed forces neutralised Pakistan's air defences, and struck a critical facility near Nur Khan Air Base in Rawalpindi.

Increased defence outlay

In Pakistan's budget for FY2025-26 presented on June 10, defence was provided an increased outlay despite overall downsizing of the expenditure by 7%. The stated figure for defence expenditure was 2.55 trillion Pakistani rupees. This, however, does not include an allocation of 742 billion Pakistani rupees on account of military pensions. Therefore, the overall defence outlay is 3.29 trillion Pakistani rupees (\$11.65 billion). This represents a sharp hike of more than 17% over the previous year's budget. The development sector, already neglected, has seen a 50% reduction to 1 trillion Pakistani rupees in the recent budget.

Pakistan is a heavily indebted country. The interest payment of 8.207 trillion Pakistani rupees is the largest item of expenditure in the budget, accounting for 74.14% of the federal government's revenue share of 11.07 trillion Pakistani rupees. The total expenditure on account of defence and debt service exceeds Islamabad's share of revenue. Federal government departments, other than defence, have to be run on the basis of fresh loans. While Shahbaz Sharif's government has projected an improved foreign exchange position with reserves amounting to \$11.5 billion, this was made possible only by the rollover of \$16 billion of loans by friendly countries.

Ideology

On April 16, General Munir in a speech told his Pakistani audience that they belong to a "superior ideology". He also mentioned the two-nation theory, and said that Kashmir is the jugular vein of Pakistan. However, Mr. Munir was simply repeating what has become Pakistan's official creed.

It was Muhammad Ali Jinnah who had originally propounded both these ideas. The ideology of Pakistan since then has been to impose a uniform religious identity ignoring national and linguistic diversities of its people. This lies at the heart of the conflict in Balochistan, which never wanted to join Pakistan. The Khan of Kalat had declared independence in 1947, supported by the Loya Jirga. While Jinnah initially recognised Balochistan's independence, he later sent in troops to suppress the new founded state.

The thrust of General Munir's April speech was on suppressing the Baloch national struggle. Balochistan is strategically important as it borders the Sistan-Balochistan province of Iran where the Chabahar port is located. Gwadar is essentially a military facility for the Chinese navy, and not a transport hub. It accounts for only 1% of Pakistan's maritime trade.

Has Pakistan discovered new fault lines to exploit? The timing of the U.S.'s entry into the Iran-Israel war could not have been better from Pakistan's point of view. Its sinking economy needs continued assistance despite the 25 IMF bailout packages it has received so far.



With the increasing imprint of religion in Pakistan's polity, the sectarian divide has coloured its relations with Iran. Internally, there has been a rise in attacks by Sunni extremist groups on Shia pilgrims going by the land route to Shia holy cities in Iran and Iraq. This is not a coincidence — these groups enjoy the Pakistan army's support which has used them to counter Baloch nationalism. While a tacit understanding with the U.S. on Iran could hold the fort, it will have a domestic cost. It will not go down well with the jihadist constituency the Pakistan army has cultivated. For in the same speech in which he ranted against India, General Munir also pledged support to the struggle of the people of Gaza against Zionist Israel.

Pakistan has thus lived and is continuing to live with such contradictions.

PAKISTAN NOMINATES TRUMP FOR 2026 NOBEL PEACE PRIZE

Pakistan has nominated U.S. President Donald Trump for the 2026 Nobel Peace Prize, citing his "decisive diplomatic intervention" in de-escalating the 2025 India-Pakistan conflict. The announcement, made via a post on X on June 20, 2025, followed a White House meeting between Trump and Pakistan Army Chief Asim Munir on June 17, 2025. The conflict, sparked by a terror attack in Pahalgam, Jammu and Kashmir on April 22, 2025, led to four days of intense cross-border strikes, ending with a ceasefire on May 10, 2025, after talks between the military directors of both nations. Pakistan credits Trump's diplomatic efforts and trade leverage for securing the truce, praising his "strategic foresight and stellar statesmanship" in preventing a broader nuclear conflict. However, India denies U.S. mediation, asserting the ceasefire resulted from its strong military response and direct bilateral talks. Pakistan also highlighted Trump's offers to mediate the Kashmir dispute, a long-standing issue. The nomination has stirred controversy, with some Pakistani critics questioning it due to Trump's support for Israel's actions in Gaza and U.S. strikes on Iran, announced shortly after the nomination.



DreamIAS

**NATIONAL****MISSED OPPORTUNITY**

The Qingdao meeting of Defence Ministers of the Shanghai Cooperation Organisation (SCO), that ended without a joint communiqué, indicates trouble within the 10-nation grouping. Defence Minister Rajnath Singh was forced to withdraw from the joint declaration as it contained no reference to terrorism at the behest of “one nation” — a reference to Pakistan. This is understandable, given that the meeting comes just weeks after the Pahalgam attack, and Operation Sindoor, after which India’s resolve to fight terrorism has redoubled. What sounds more surprising is that not only did the draft resolution fail to mention terrorism but member-states including host China and Russia had even reportedly considered referring to “disturbances in Balochistan”, at the instance of Pakistan, while leaving out mentions of the Pahalgam attack and cross-border terrorism, that India asked for. This is stark given that the SCO’s founding Charter in 2002 focused on the need to build “mutual intraregional efforts to curb terrorism, separatism and extremism”, and the Director of SCO’s signature Regional Anti-Terrorist Structure was present. Statements by the SCO Secretariat and the Chinese Foreign Ministry stuck to anodyne statements such as “...cooperation ...on modern security challenges and threats”. All eyes will now be on the SCO Foreign Ministers’ July meet and the SCO Summit in August-September to see if India’s concerns are more appropriately addressed.

New Delhi must study whether there are shortcomings in delivering its message on the three-pronged “new normal” Prime Minister Narendra Modi announced after Operation Sindoor. In particular, China’s unhelpful role as Chair on the issue is disquieting, given its recent thaw with India. Unlike the SAARC grouping, where India held sway, the SCO is more focused on the original founders China, Russia and Central Asian States. Mr. Singh’s participation followed closely on the heels of India disassociating itself from a statement on Israel’s June 13 attack on SCO member Iran as it was critical of Israel. Post-Operation Sindoor, the government sent parliamentary delegations to 32 countries, but not to any SCO member-country. It is possible that the government lost a chance to give the grouping any prominence by doing so, although External Affairs Minister S. Jaishankar chaired a meeting of the India-Central Asia forum in June. India’s decision to skip hosting an in-person Summit of the SCO during its turn in 2023 could also still rankle. Breaking with the grouping, which is an important regional forum, will simply leave an open platform for Pakistan. Instead of crying foul, the government must convince members that their interests lie in strengthening cross-regional support against terrorism.

INDIA SEEKS PAUSE IN WORLD BANK EXPERT’S PROCEEDINGS OVER KISHANGANGA & RATLE

India has written to the World Bank’s neutral expert, Michel Lino, requesting a pause in his proceedings on the Ratle and Kishanganga hydropower disputes, following the Union government’s decision to place the Indus Waters Treaty (IWT) in abeyance, The Indian Express has learned.

- Lino is understood to have sought Pakistan’s views on India’s request, which Islamabad has opposed. The disputes being heard by Lino since 2022 concern two Indian hydropower projects in Jammu and Kashmir — Kishanganga, on the Kishanganga river, and Ratle, on the Chenab river.



- A French dam engineer and, until recently, the president of the International Commission on Large Dams, Lino was appointed by the World Bank on October 13, 2022, under Article IX and Annexure F of the Indus Waters Treaty.
- His mandate is to hear both India and Pakistan and determine whether the design of these projects complies with the treaty. Pakistan claims India is violating the treaty, particularly on minimum water flow requirements.
- Following the Union Cabinet's decision to keep the treaty in abeyance "until Pakistan credibly and irrevocably abjures its support for cross-border terrorism," the Indian government formally notified Lino and requested that he vacate the mutually agreed "work programme" pertaining to the Kishanganga and Ratle disputes. In its response to Lino, Pakistan objected to India's stance and opposed any proposal to suspend the dispute resolution proceedings.
- As per the agreed 2025 work programme, which India now wants vacated, Pakistan was to submit its written response – or counter memorial – to India's submission by August 7. The fourth meeting of the neutral expert with both sides was scheduled for November 17 to 22.
- This meeting would have been significant, involving the presentation of India's written arguments (memorial) and Pakistan's counter, questioning by the neutral expert, and preparations for a second site visit to India, likely in December.

Do You Know:

- After The Pahalgam attack, India kept the IWT in abeyance "until Pakistan credibly and irrevocably abjures its support for cross-border terrorism". Under the IWT, the waters of the "Eastern Rivers" — Sutlej, Beas and Ravi – are for India's unrestricted use, while the "Western Rivers" – Indus, Jhelum, Chenab – are primarily for Pakistan.
- According to top government sources, New Delhi is currently not inclined to engage in discussions with Islamabad on the matter, and the treaty will remain in abeyance for now.
- Meanwhile, sources said the government has drawn up a plan to construct a canal to divert water from the Indus river system to various Indian states. It has also carried out two flushing exercises at Baglihar and Salal – two run-of-the-river hydroelectric projects on the Chenab in J&K – to clear sediment that hampers power generation.
- These are the first such exercises since Salal was built in 1987 and Baglihar in 2008–09. Pakistan had previously blocked such activities through objections under the IWT. Officials said flushing will now be conducted on a monthly basis.
- Earlier, The Indian Express had reported that the Centre is looking to fast-track four hydroelectric projects on the Chenab – Pakal Dul (1,000 MW), Ratle (850 MW), Kiru (624 MW) and Kwar (540 MW). Pakal Dul is the first storage-based hydro project being built in J&K.

EXPRESS VIEW ON 50 YEARS SINCE EMERGENCY: LEST WE FORGET

Today, June 25, a nation pauses to remember the time when an elected government brought constitutional democracy to a halt. It is a sobering day of commemoration of a slide into the dark, and a moment to say "never again". It is for that reason, too, that the day of promulgation of the Emergency is an occasion to celebrate the Opposition — with a big 'O' and a small 'o'. It includes the politicians who went to jail, standing up, in 1975-77. This, even as the Bench went down on its

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knees and large sections of the Press crawled, making the blank editorial on this page and journalists of The Indian Express in prison an exception. Today, it encompasses those who question the dominant common sense, the lonely dissenter, and the rebel with a cause; the political party that articulates an alternative to the dominant idea and established policy; the student on campus who objects; and the institution that protects its sense of purpose, no matter who is in power. The Emergency was an assault on all of these. The Indira Gandhi government came down on the right to oppose, undermined institutional checks on the abuse of power, and corroded processes of accountability. That is why, 50 years later, it remains a thick and dark stain on the body politic. Gestures of penance, like the overruling by a former Chief Justice of India, 41 years later, of an Emergency-era verdict given by his father — one of the four judges on a bench which decreed that a person's right to not be unlawfully detained can be suspended by the state — are not enough. A collective reckoning is still incomplete.

The fuller reckoning must acknowledge that the work of democracy is not yet done. And that the onus is on the leaders of institutions, it cannot be cavalierly passed on to “the people,” or frittered away in partisan jostling and election slogans. Much has changed since Mrs Gandhi imposed the Emergency and withdrew it nearly two years later. But a dangerous set of ideas that were set in motion then, when the nation was not yet 30 years old, have had a troubling after-life. Some have got a disquieting new lease of life, 50 years on — be it the demonisation of the Opposition, the over-reach of preventive detention, viewing those who ask questions with suspicion, the undermining of judicial independence, the genuflection by sections of the media, or the constant search for the “enemy” within. In the battle between fear and trust, fear wins more not less.

Yet, there are substantive ways in which democracy is stronger today. After missing a step during the Emergency, the judiciary recovered its balance; civil society has grown more vibrant; technology has created echo chambers but also broken down walls and amplified voices long silenced; the federal frame, reinforced by strong regional parties, has acquired resilience. Some, though not all, monitorial institutions have gathered respect, and electoral-political mobilisations have empowered neglected constituencies. And yet, at the same time, a democracy carrying the burden of accumulated cynicisms and waning idealism is also coming under pressure from new forces. Public discourse is being shaped by the anonymised forces of othering and hate, allowing lies to fly and assisting in short-circuiting due process. Let this day, then, be marked with a sense of humility, and an acknowledgement: The Emergency is long over, mercifully. But a politics and governance that ensure it never happens again are, and should always remain, work in progress. The stain of 1975-1977 should never be whitewashed — let it remain visible lest we forget.

A LOFTY CONCEPT, A GOVERNOR AND UNWANTED CONTROVERSY

A picture of 'Bharat Mata' (Mother India) has triggered a confrontation between the Governor of Kerala and the State government. At a recent function, the Governor had placed a painting of Bharat Mata in the form of a female figure clad in a saffron colour sari with a spear in one hand and standing with a lion behind her against a backdrop of the map of India. The painting had been placed in a room where official functions are held at Raj Bhavan. A tall brass lamp was placed before this garlanded picture. Before any official function begins, the Governor bows before it, offers flowers and lights the lamp. The Chief Minister and other Ministers had raised objections on the grounds that this picture of Bharat Mata is not recognised by the Constitution or any law unlike the national anthem of India or the national flag or other national symbols. Therefore, the government seems to have taken a position that it will not participate in any official function organised by the Governor where this picture is displayed.



The slogan, 'Bharat Mata ki Jai', was the emotional cry of freedom fighters which would electrify the minds of people who were fighting for freedom from colonial rule. And, they used to raise this slogan at the highest pitch when they were subject to lathi blows. Thus, Bharat Mata is one that deeply resonated with the countless millions during India's freedom struggle.

But the question in this issue in Kerala is not whether we should pay obeisance to this image of Bharat Mata. There is no doubt that Indians have a deep and emotional bond with the concept of Bharat Mata. However, in the Kerala episode, the issue is that the Governor has and uses a picture of what is claimed to be Bharat Mata at the venue where official functions organised by the government are held and offers floral tributes to it as a part of the official function.

The conduct of the Governor

Since no picture of Bharat Mata in any form has been recognised by either the Constitution or any law or adopted like the national anthem, the national flag, the national emblem or even the national symbols, such a picture cannot be a part of any official function organised by the government. It may be noted here that this picture of Bharat Mata is used only by the Rashtraiya Swayamsevak Sangh and the Bharatiya Janata Party in their functions. The Governor, being the constitutional head of the state, is expected to conduct himself in accordance with the Constitution. The Governor cannot take independent decisions in the performance of his duties and functions but can act only in accordance with the advice of the elected government. So, if the government decides that such pictures should not be placed at the venue of official meetings organised by the government, the Governor is required to go by that decision.

The personification of Bharat Mata as a mother figure was first done by renowned Bengali novelist, Bankim Chandra Chattopadhyay, in his late 19th century work, Anandamath. But the mother symbol he created was Banga Mata (Mother of Bengal) — and not Bharat Mata — and it became the powerful symbol of Bengali nationalism.

But it was Abanindranath Tagore, the nephew of Rabindranath Tagore who first did a painting of the Banga Mata in 1905. This depiction, with four arms, in some ways resembled a Hindu goddess. It was sister Nivedita, a prominent disciple of Swami Vivekananda, who popularised this painting as Bharat Mata. Later, 'Bharat Mata ki Jai' became the most powerful slogan of the national freedom movement but without any visual representation. The national movement never adopted any picture of the Bharat Mata.

A lofty concept

No one has defined the concept of Bharat Mata as brilliantly as Pandit Jawaharlal Nehru. He explains it in his inimitable style in his Discovery of India: "...sometimes as I reached a gathering a great roar of welcome would greet me: Bharat Mata ki Jai-Victory to Mother India. I would ask them unexpectedly what they meant by that cry, who was this Bharat Mata, whose victory they wanted..... The mountains and the rivers of India and the forest and the broad fields which gave us food were all dear to us, but what counted ultimately were the people of India, people like them and me who were spread out all over this vast land. Bharat Mata, Mother India, was essentially these millions of people and victory to her meant victory to these people."

It is rather unfortunate that this lofty concept of Bharat Mata has triggered an unseemly controversy involving the Governor of Kerala. Obviously the picture of a female figure in a saffron sari, with a spear in hand and a lion behind her, cannot be a symbol of Bharat Mata. The display of such a picture is a throwback to 19th century nationalism which has no relevance in modern



times. Indian nationalism under Gandhi had a strong secular core and was inclusive. Anthropomorphisation of a country is an outdated idea. The diversities, the divisions of Indian society, multiple religions, races, and different levels of cultural developments cannot be represented by such a figure.

Governor versus the government

The country has witnessed too many unseemly fights between Governors and State governments. The Supreme Court of India has intervened in some cases and tried to set things right. Nevertheless the Governor-government spats continue to occur. The Constitution and the interpretations thereon by the Supreme Court have clearly laid down the limits of a Governor's powers and functions. Dr. B.R. Ambedkar had said emphatically in the Constituent Assembly, "the governor under the constitution has no functions which he can discharge by himself, no functions at all."

The Raj Bhavan Kerala controversy, deliberate or otherwise, was absolutely unnecessary. It sours the relationship between the Governor and the elected government. In official functions, symbols or logos or other visual representations used by private organisations cannot be used. Raj Bhavan does not merely consist of the private chambers of the Governor. There are rooms and halls where government functions are held such as a swearing-in ceremony as it is done in Rashtrapati Bhavan.

The Governor is bound by the advice of the government on, for example, the placing of photographs, portraits in such places and also of performing various actions in an official function such as the lighting of the lamp as in protocol approved by the government. The Governor, for example, cannot order that the picture of Bharat Mata should be placed in all government offices. It is a decision only the government can take. All constitutional authorities are bound by the disciplines of the Constitution. The government has the constitutional right to advise the Governor not to place the picture of Bharat Mata at venues used to conduct official meetings on the ground that such a picture has not been recognised by the Constitution or statutes.

CAUSE AND EFFECT

Concerns surrounding citizenship faced by sections of society in India's border States have come to the fore again with courts stepping in to provide temporary relief to harassed individuals. The issues arising from these cases are far from settled. On June 24, the Supreme Court of India stayed the deportation of Jaynab Bibi who was labelled a "foreigner", first by the Foreigners' Tribunal in Assam, and then by the Gauhati High Court. Despite hailing from a family whose members have lived in Assam for generations, and furnishing all documents, she has had to run from pillar to post to prove that she is an Indian citizen. A Bench of Justices K.V. Viswanathan and N. Kotiswar Singh ordered the Union government not to take any coercive steps against Ms. Bibi, till the next hearing in August. In the case of Rakshanda Rashid, the High Court of Jammu and Kashmir and Ladakh ordered the Union Home Secretary to repatriate the 63-year-old housewife to India. She was deported to Pakistan following the crackdown against Pakistani nationals after the Pahalgam terror attack in April. Ms. Rashid, a Pakistani national, had been staying in Jammu for the past 38 years with her husband and two children, and had a long-term visa. Her application for citizenship in 1996 is yet to be processed.

In his order, High Court judge Rahul Bharti said human rights are the most sacrosanct component of a human life and that there are times when a court has to respond "SOS like" without going into



the merits and demerits of a case, which can be decided on in due course of time. The lawyers for Ms. Bibi referred to Md. Rahim Ali @ Abdur Rahim vs The State Of Assam in 2024 in which the Supreme Court touched on the manner in which people in Assam were being randomly suspected as foreigners without any cogent evidence. "...[I]t is well settled that suspicion, however high it may be, can under no circumstances, be held to be a substitute for legal evidence," it said, laying down the due process to be followed when an individual is declared a foreigner. The Citizenship (Amendment) Act of 2019, by offering citizenship to six non-Muslim communities in Afghanistan, Pakistan and Bangladesh, adopted a narrow and arbitrary view of "religious persecution". The innate violence in the rhetoric of senior Bharatiya Janata Party Chief Ministers such as Yogi Adityanath and Himanta Biswa Sarma against minorities has heightened the anxiety felt by the marginalised, poor, sometimes undocumented, communities. Governments must uphold human rights and dignity of the individual, as provided for under the United Nations Universal Declaration of Human Rights, and not have to be nudged by courts.

SHOULD THE METHOD OF COUNTING CASTE CHANGE?

The story so far:

The Central Government has announced that the next Census would take place in 2027 and that it would collect information on castes. Can such a massive data exercise be made more useful through a restructuring of the existing Census process?

How is the Census conducted?

The first phase of the Census, called house-listing, would probably be conducted between April to September in 2026. This stage lists all the dwelling units in the country where people live, along with several characteristics of the houses and households.

The second phase called the population enumeration phase would be conducted in 2027, wherein information on several key socio-economic characteristics of the population would be collected. This is also the stage where caste would be recorded.

Why is caste being recorded?

The recording of an individual's caste was last done in the 1941 Census. However, that data could not be processed due to economic constraints of the Second World War. Thus, effectively, the last Census to provide data on caste has been the 1931 Census that has become too outdated to use for any purpose.

Prime Minister Narendra Modi is reported to have said that caste enumeration as part of the Census is a step the government is taking to bring the marginalised and those left behind in every field into the mainstream. However, given the limitations of the Census as a method of data collection as well as the design of the Census questionnaire, it is doubtful whether this objective can be fulfilled. A restructuring of the Census questionnaires could make more useful data be made easily available to further the objectives indicated by the Union government.

What are the problems with the questionnaires?

It is presumed that the questions that were included in the draft questionnaires for the 2021 Census may more or less remain the same for the 2027 Census. In the 2021 draft, the question on caste was restricted to those belonging to Scheduled Castes (SC) as in the past Censuses.



By making this question applicable to all castes, except Scheduled Tribes (ST), and with consequent changes in instructions and the software used for electronic data collection, data on castes can be collected. The practical difficulties of collecting data on castes is not within the scope of this article. Information on specific castes can be ascertained through literacy/educational levels; age at marriage; mother tongue and other languages known; status of the individual as the main worker, marginal worker or non worker; seeking/available for work; broad classification of industry/occupation of the workers; place of birth/ previous residence; and data on child birth and survival.

While the data on 'mother tongue and other languages known' may not be of much importance in assessing the socio-economic status of various castes, information on participation in economic activity and its broad classification may be of use. However, the data on unemployment derived using the response to the question "whether seeking/available for work" suffers from conceptual issues and lack of attention in data collection. For example, this question has a reference period of one year. However, it is not clearly mentioned as to how long a person should be seeking/or be available for work to be classified as unemployed. Though this question has been asked in every Census starting from 1981, it could never give useful data.

Information on 'child births and survival' collected in the Census suffers from serious quality issues. These questions, included in the Census from 1981, have outlived their utility as similar information is better collected through the National Family Health Surveys. Getting any reliable caste-wise data from these questions is almost impossible.

Information on migration may be an important aspect to assess whether people of certain castes are more prone to migration. However, data from previous Censuses seem to indicate that a large percentage of migrants are not counted or are not recorded as migrants.

Thus, the only information that would be available to classify caste are those of education, age at marriage and participation in economic activity.

While the Census does collect other information that would help in moving towards the objectives stated by the Union government for the inclusion of caste in the Census, it would need some serious restructuring of the Census questionnaires and process.

How should the Census questionnaires be restructured?

The main objective of the house listing phase is to prepare a list of all dwelling units where people are living or are likely to be living at the time of the Census. This framework helps in carving out new enumeration blocks as required and thus helps balance the workload of the enumerators. Several questions relating to quality of housing, amenities available to households and assets owned, have been asked during this phase from the 1991 Census onwards.

However, in the 1981 Census, these questions were in the household schedule canvassed during the second phase of the census, that is the population enumeration phase.

Transferring these questions from the house-list schedule to the household schedule would help linking information on quality of housing, amenities and assets to other aspects of the population easier. As there is a time gap of six to nine months between the house-listing and population enumeration phases, linking the information on the basis of house number, name of the head of the household etc. may bring about error. Such errors may seriously impact the reliability of data, especially for small communities.



Taking the questions out of the house-listing schedule would also help enumerators to concentrate on the listing of all buildings, be it residential, partly residential or non-residential along with the number of people living in them. Improved house-lists would help in better coverage of the Census. This is very important in urban areas which have higher omission rates in most Censuses.

Such linkages or transfer of questions have not been adopted in either the 2011 Census or in the planning of the 2021 Census (which was advanced due to the COVID-19 pandemic).

Without such data in the Census, it is not possible to answer questions like, “What is the literacy rate of persons living in kutcha house without electricity and whether this is significantly lower than that of others” or “What proportion of the workforce in urban areas live in kutcha houses?”, etc.

The Census should be able to provide answers to the above questions, disaggregated by caste. Then only can the data be used for identifying marginalised communities and the extent of disparities between them. Though collecting accurate data through a Census on many of these variables is not an easy process, and though the quality of data might suffer, it is the best alternative as of now.

Should some questions be omitted?

There is a need to make the Census leaner by dropping unnecessary questions. Several questions on amenities available to the household or assets owned by them may have become redundant. For example, ownership of mobile phones or that of computers may not be as important now as it was five years ago. Similarly, questions on access of households to bank accounts might be omitted. A shorter questionnaire would help the enumerator concentrate on getting more accurate responses to the questions.

The Census has been providing caste/tribe wise data on several socio-economic variables. It is doubtful whether this data have been used to identify the most backward castes/tribes for similar exercises that could aid policy/program formulation. Hopefully, caste-wise data thrown up by the upcoming Census would be used better in policy and program formulations, and be used beyond decisions regarding the percentages for reservation.

ENSURE ISSUE OF BIRTH CERTIFICATE BEFORE DISCHARGE OF NEWBORNS, RGI TELLS STATES

The Registrar-General of India (RGI) has asked all States to ensure that birth certificates are issued to mothers of newborn children before they are discharged from hospitals, particularly government-run hospitals, which account for more than 50% of institutional births in the country.

The RGI office said the registrar should give the birth certificate as soon as the registration of birth is completed “but not later than seven days” in an electronic or other format.

“You will appreciate that this office, in its endeavour of making the registration process smooth and user-friendly, has taken several steps to improve the Civil Registration System, including amendment to the Registration of Births and Deaths Act, 1969, corresponding amendment to State Registration of Births and Deaths Rules, development of a new Central CRS portal, etc. In view of the increased importance of the birth certificate, it is the need of the hour that the certificate is delivered to the mother of the newborn child before her discharge from the hospital, especially by



the government hospitals where more than 50% of total institutional births occur,” the June 12 letter by the RGI office said.

It said government hospitals, community health centres and primary health centres across the country are working as registration units and the registrars of such units should be sensitised to the importance of immediate issue of birth certificate as its utility has been recently increased manifold.

From October 1, 2023, the digital birth certificate is the single document to prove the date of birth for various services such as admission to educational institutions, government jobs, marriage registration among others. A birth certificate is issued by the Registrar in accordance with Section 12 of the Registration of Births and Deaths (RBD) Act, 1969. The RBD Act, 1969 which was amended in 2023, mandates registration of all births and deaths on the Centre’s portal from October 1, 2023. Earlier, States maintained their own database and shared statistics with the RGI office under the Union Home Ministry.

SHARP RISE IN WOMEN MAOISTS KILLED IN OPERATIONS IN CHHATTISGARH SINCE 2024

Since 2024, Chhattisgarh has seen a sharp rise in the proportion of women Maoist cadres killed in security operations, aligning with intensified efforts to eradicate Maoism by March 2026, as mandated by the Union Home Ministry. In 2024, 217 Maoists were killed, including 74 women (34%), while by June 20, 2025, 195 Maoists were killed, with 82 women (42%). This marks a significant increase compared to previous years: 2019 (65 killed, 17 women, 26%), 2020 (40 killed, 7 women, 18%), 2021 (51 killed, 13 women, 25%), 2022 (30 killed, 9 women, 30%), and 2023 (20 killed, 5 women, 25%).thehindu.com

The Ministry reports that Maoists recruit young girls into "Bal Dastas" in Chhattisgarh and Jharkhand, coercing Adivasi families to surrender their daughters due to threats, contributing to the high number of women cadres. Despite anti-patriarchy rhetoric, women are rarely in leadership roles and are often used as foot soldiers or human shields, facing exploitation and hardship. Inspector-General P. Sundarraj noted that tribal and rural women in Bastar are frequently misled or forced into Maoist ranks, with security forces prioritizing humane rehabilitation and voluntary surrender to address the issue.

RAJASTHAN, TELANGANA, BIHAR RECORD HIGHEST CHILD LABOUR RESCUES IN FY25: REPORT

Signifying a major crackdown on child labour and trafficking networks, Telangana, Bihar and Rajasthan have emerged as the top three states in India for child labour rescues as well as for the number of arrests in child labour related cases in 2024-25, a study by a network working in the field of child rights has shown.

- Of the 53,651 children rescued nationwide by a network of over 250 NGOs, Rajasthan accounted for as many as 3,847 child labour rescues while Telangana topped the list with 11,063 rescues followed by Bihar with 3,974 rescues. The network, Just Rights for Children (JRC), led the 38,889 rescue operations across 24 states and union territories in coordination with the law enforcement agencies, JRC said Monday.
- The report reveals even more disturbing trends: nearly 90 percent of children rescued across India were found working in sectors classified as the worst forms of child labour — including spas,



massage parlours, and orchestras — where children are subjected to prostitution, pornography, and other forms of sexual exploitation. The findings are part of the report titled “Building the Case for Zero: How Prosecution Acts as a Tipping Point to End Child Labour”, published by the Centre for Legal Action and Behaviour Change (C-LAB), the research wing of JRC partner India Child Protection.

- The report further states that following the raids, 38,388 FIRs were registered and 5,809 arrests were made, 85 percent of which were related to child labour. Telangana led with 11,063 children rescued, followed by Bihar (3,974), Rajasthan (3,847), Uttar Pradesh (3,804), and Delhi (2,588). A total of 5,809 individuals were arrested, 85 percent of them in child labour – related cases. Telangana, Bihar, and Rajasthan reported the highest arrests, while states like Uttar Pradesh and Madhya Pradesh had fewer arrests despite high rescue numbers — highlighting enforcement gaps, the report said.
- Given the gravity of the situation, the report recommends launching a National Mission to End Child Labour, allocating adequate resources for it, and forming district-level Child Labour Task Forces. The report, which is based on the data from the rescue operations conducted by the country’s largest NGO network working for child protection, is for the period April 1, 2024 to March 31, 2025.

Do You Know:

- The report also emphasises legal action, education, and rehabilitation for the eradication of child labour and makes several recommendations. It said that unless strict legal action is taken against offenders, it will be difficult to curb child labour. Moreover, if there are no arrangements for the education and rehabilitation of rescued children, they will fall back into the vicious cycle of child labour. Hence, a Child Labour Rehabilitation Fund is the need of the hour.
- Also, ensuring free and compulsory education for up to 18 years will help in preventing child labour, as children who drop out of school are more likely to get trapped in exploitative labour, the report has stated. The report calls for comprehensive policy changes, a zero-tolerance policy on the use of child labour in government procurement, an expansion of the list of hazardous industries, state-specific child labour policies, extending the SDG 8.7 deadline to 2030, and strict, time-bound legal action against perpetrators.

HOW WILL FOREIGN UNIVERSITIES IMPACT HIGHER EDUCATION?

The story so far:

Several foreign universities are setting up branch campuses in India. So far seven universities from the U.K., five from Australia, and one each from the U.S., Italy and Canada are in the process of obtaining necessary approvals or have done so already. Most will be located in GIFT City and Navi Mumbai. While India has been interested in attracting foreign universities for more than a decade, the 2020 New Education Policy (NEP) revived it and the government subsequently approved the UGC (Setting up and Operation of Campuses of Foreign Higher Educational Institutions in India) Regulations, 2023 (FHEI).

Why are foreign universities coming?

The countries of the Global North embarked on a massive expansion of higher education in the post-Second World War years to accommodate the growing number of young people headed to



college. Over time, however, with falling birth rates, domestic enrolments started to plateau and then fall. By the early 21st century, the physical infrastructure and human capital of higher education institutions (HEIs) was too large for the diminishing numbers. This, along with cuts in public spending on higher education, started to create financial challenges. The solution was found in admitting larger numbers of international students who could be charged substantially higher tuition fees.

In 2023, international students represented 22% of total enrolments at U.K.'s universities, 24% in Australia and 30% in Canada. Though only 6% of enrolments at U.S. universities are international students, they make up for 27% of students at Ivy League schools. Universities in all "big four" host countries – Australia, Canada, the U.K. and the U.S. — have become financially reliant in varying degrees on international students. Over the past year, however, there has been a blowback. Australia and Canada have capped their international student numbers. In the U.K., new rules introduced in 2024 reduced the number of student visa applications. These restrictions are hurting universities. Redundancies have become widespread in the U.K., Australia and Canada. Therefore, many universities are looking to India to compensate for the reduced numbers of international students at their home campuses and to diversify their revenue sources.

What are some of the challenges?

India's young population and a relatively low but steadily rising gross enrolment ratio of just under 30% offers immense opportunities. However, branch campuses in other parts of the world — in China, Southeast Asia, and West and Central Asia — have a mixed record. There are several instances where they have lost money and exited. India will not be a walk in the park either.

First, India's higher education market is large in terms of student numbers — 40 million+ — but smaller in terms of the cost that an average student or family can afford. However, India is a growing economy and in the coming years, more people will be able to afford a relatively expensive college education. Second, India lacks a sufficient number of good quality HEIs. Beyond a small number of public and even fewer private institutions, the majority are average to mediocre. Branch campuses will offer better quality education than the majority of HEIs. Third, while many Indians aim to study abroad in order to emigrate, there are others who intend to work in India. Branch campuses will offer these students the option of a foreign degree at home.

The immediate to medium term impact of branch campuses can be expected to be limited. Even if a dozen or two of them are set up, their total student intake will be small. The response of Indian students to branch campuses in the first few years will be crucial to what happens next.

WHAT IS IIT-D'S FEAT IN QUANTUM COMMUNICATION?

The story so far:

On June 16, the Ministry of Defence said in a statement that IIT-Delhi scientists together with the Defence Research and Development Organisation (DRDO) demonstrated quantum communication over a distance of more than one km in free space.

What is quantum communication?

When two or more photons, the subatomic particles of light, are created in just the right way, measurements made on one photon will instantly determine the result for the partner photon, too — even if the photons are far apart. This phenomenon is called quantum entanglement. Quantum



communication is an umbrella term for any scheme that uses the concepts of quantum physics, but especially entanglement, to make a given communication channel leak-proof. In one scheme, like the one the IIT-Delhi team demonstrated, entangled photons carry information from a source to two stations. If any third party intercepts one of the photons, the other photon will immediately be disturbed as well and the channel will be revealed as insecure. In short, quantum communication can be used to create communication channels that are protected against computational attacks since any attempt to tap the quantum channel will itself be revealed. Thus they have great value in defence settings. An important method in quantum communication is quantum key distribution (QKD).

How does QKD work?

If Bala has a message for Selvi that he wants only Selvi to receive, a simple way is to send a letter. At the address, the postal worker will deposit the letter into a letterbox. The location of the letterbox is public knowledge, but only Selvi will have the key to access it. The key is private knowledge. Receiving email works similarly: Bala will send an email to Selvi's email ID (public knowledge) and Selvi will use her password (private knowledge) to access it.

QKD is a specialised form of quantum communication whose sole purpose is to help Bala and Selvi possess identical secret keys. Once they both have the key, they can unlock and read the messages they send each other. Note that QKD doesn't encrypt the message itself: that's achieved using traditional algorithms like Advanced Encryption Standard (AES). Instead QKD helps both parties acquire the key to unlock that encryption in a secure way. There are two kinds of QKD. In the classic prepare-and-measure way, Bala prepares single photons in some predetermined states and Selvi measures them. In entanglement-based QKD, a source creates entangled photon pairs and sends one photon to Bala and the other to Selvi.

What did the IIT-Delhi team do?

The IIT-Delhi team, led by Prof. Bhaskar Kanseri, transmitted keys through the air using entanglement-based QKD, across a distance of one km in the IIT campus. This is a step up from transmitting photons through an optical fibre. The greater goal here is to establish reliable QKD between a ground station and a satellite orbiting the earth hundreds of kilometres up. This way the satellite can distribute keys to receivers anywhere in India by beaming photons through the atmosphere. Notably, the test demonstrated "a secure key rate of nearly 240 bits per second with a quantum bit error rate of less than 7%". When the photons reach Bala and Selvi, they will measure each particle. Since they're entangled, the measurements have to match up. In this case the measurements disagreed <7% of the time, which is considered acceptable for the present scheme. Common sources of error include turbulence in the air, detector noise, and artificial lighting.

Previously, Prof. Kanseri's team had demonstrated a quantum communications link between Vindhyachal and Prayagraj in Uttar Pradesh in 2022. In 2024, they established a QKD scheme through more than 100 km of an optical fibre link.

What next?

The IIT-Delhi team demonstrated the technology in the presence of dignitaries from the DRDO, the institute, and the Directorate of Futuristic Technology Management. After the event, Minister of Defence Rajnath Singh said India had "entered into a new quantum era of secure communication which will be a game-changer in future warfare." These changes entail a quantum



network with multiple nodes maintaining quantum communications. To help scientists develop such technologies, the Indian government approved the National Quantum Mission in 2023 with an outlay (2023-2031) of ₹6,000 crore. Quantum communication has important civilian applications too, especially in the banking and telecom sectors.

LOITERING MUNITIONS, COUNTER-DRONE SYSTEMS: MOD SIGNS 13 CONTRACTS

From a range of Remotely Piloted Aerial Vehicles (RPAVs), loitering munitions, drones and counter-drone systems to Very Short Range Air Defence Systems (VSHORADs) and radars, the Ministry of Defence has signed 13 contracts worth Rs 1,981.90 crore under the Emergency Procurement (EP) mechanism to “enhance situational awareness, lethality, mobility, and protection for troops deployed in CT environments”.

- The development is significant. India had launched Operation Sindoor against terror targets inside Pakistan last month, leading to both countries launching retaliatory strikes at each other for three days before a ceasefire was reached.
- Aimed at enhancing the Indian Army’s operational preparedness in counter-terrorism operations, the EP mechanism would enable deliveries under fast-track procedures, as against the longer procurement processes applied for other planned defence capital and revenue procurements. This will be the sixth phase of emergency procurements.
- According to the Defence Ministry, some of the key equipment and systems being procured under the EP mechanism include Integrated Drone Detection and Interdiction Systems (IDDIS), Low Level Lightweight Radars (LLLR) and VSHORADs – Launchers and Missiles.
- The list also includes loitering munitions, including Vertical Take-Off and Landing (VTOL) systems, bulletproof jackets (BPs), ballistic helmets, Quick Reaction Fighting Vehicles (QRFVs) – Heavy and Medium Night Sights for Rifles.
- In a statement issued Tuesday, the Defence Ministry said it has concluded 13 contracts under the EP mechanism. “These contracts, amounting to Rs 1,981.90 crore, have been finalised against an overall sanctioned outlay of Rs 2,000 crore for the Indian Army,” the statement mentioned.
- Defence officials told The Indian Express that fast-track acquisitions of a range of modern platforms, weapons, ammunition, and other accessories in the last five years have significantly upped the Indian military’s capabilities by bolstering its inventory.

Do You Know:

- Emergency powers for procurements were granted to the Armed Forces when the Ladakh standoff with China began in 2020, and also after the Balakot airstrike in February 2019 and the 2016 surgical strikes.
- However, a majority of defence procurements, which were fast-tracked, began in 2020 and continued over the next four years with repeated extensions on emergency powers granted to the military, in the backdrop of a military standoff between the two countries along the Line of Actual Control (LAC) in Eastern Ladakh.
- Hundreds of unmanned aerial vehicles, loitering munitions, swarm drones, and counter-UAV systems have been procured by the Armed Forces over the last four years, from both foreign and



domestic manufacturers, for attack, surveillance, and logistics purposes. The three services also individually procured a range of anti-drone systems from Indian firms.

- A range of weapon systems, such as the HAMMER air-to-ground precision-guided weapon system for the Rafale fighter jets, Spice Bombs, and Man Portable Air Defence System (MANPADS) and armour-piercing fin-stabilised discarding sabot (APFSDS) ammunition for the Army's T-72 and T-90 main battle tanks have been bought under emergency powers.

NAVY SET TO COMMISSION LATEST STEALTH FRIGATE TAMAL IN RUSSIA IN JULY

The Navy is set to commission its latest stealth multi-role frigate Tamal on July 1 at Russia's Kaliningrad, making it the eighth in the series of Krivak class frigates inducted from Russia over the past two decades.

- Tamal will join the 'Sword Arm' of the Navy, the Western Fleet, under the Western Naval Command and is the second ship of the Tushil Class — the upgraded versions of their predecessors, Talwar and Teg classes.
- The commissioning comes six months after the first warship of the Tushil class, INS Tushil, was commissioned at Kaliningrad.
- As part of the contract for construction of four Tushil class warships, India is building two similar frigates as INS Tushil and Tamal called the Tripud class at Goa Shipyard Limited with transfer of technology and design assistance from Russia.
- Once the construction of this series of ships is completed, the Navy will be operating 10 ships with similar capabilities and commonality in equipment, weapon and sensor fit over four different classes, the Navy said in a statement Sunday.

Do You Know:

- According to the Navy, Tamal's construction was closely overseen by an Indian team of specialists from the Warship Overseeing Team stationed at Kaliningrad, under the aegis of the Embassy of India, Moscow. At the Naval Headquarters, the project was steered by the Directorate of Ship Production under the Controller of Warship Production and Acquisition.
- The Navy said that Tamal has been built at Yantar Shipyard in Kaliningrad and is the last warship to be inducted from a foreign source in view of India's push to be self-reliant in defence. The warship has 26% indigenous components, including the BrahMos long-range cruise missile for targeting both at sea and land.
- Other indigenous systems include Surface Surveillance Radar complex and HUMSA NG Mk II sonar with the anti-submarine weapon firing complex among other weapons and sensors.
- It also features modern communication and data-link systems, navigation equipment and critical infrastructure. BrahMos Aerospace Private Ltd, Bharat Electronics Ltd, Keltron, Nova Integrated Systems from Tata, Elcome Marine, Johnson Controls India were among those involved.
- Upgrades in the warship include vertically launched surface-to-air missiles, improved 100 mm gun, new age EO/IR (Electro-Optical/Infrared) system in addition to the standard 30 MM CIWS (Close-In Weapon System, heavyweight torpedoes, urgent-attack anti-submarine rockets, and a host of surveillance and fire control radars and systems.



QUALIFIED CHEER

At noon on June 25 (IST), India's Shubhanshu Shukla lifted off with three other astronauts from NASA's Florida spaceport to the International Space Station (ISS) as part of the Axiom-4 commercial mission. This is the first time an Indian has gone to orbital space since Rakesh Sharma in 1984. If the Dragon crew capsule docks successfully with the ISS on June 26, Mr. Shukla will also become the first Indian onboard the ISS. Over the next two weeks, he and the ISS crew will perform a suite of experiments carried by the Axiom-4 mission, including eight from the Indian Space Research Organisation (ISRO). Mr. Shukla is among the leading candidates to fly in India's maiden human space flight mission, Gaganyaan, currently slated for 2027. For now, the Department of Space has not articulated the reasons for spending ₹548 crore to buy Mr. Shukla's seat on Axiom-4. Against the backdrop of the ₹20,200-crore budget for Gaganyaan, Mr. Shukla's paid flight to the ISS, packaged along with advanced training for him and back-up crewmate Prasanth Nair, will give India considerable insight into human space flight and how it is coordinated ahead of mounting its own astronaut expeditions, regardless of the money spent. However, this does not spare the Department of Space and ISRO from communicating the rationale and extent of these benefits, which has yet to happen.

Space flight has changed considerably between Mr. Sharma's and Mr. Shukla's flights: the stakes today are multidimensional and more demanding. Axiom is a private entity contracted with NASA and SpaceX, and which sells seats to commercial missions to the ISS. But uncertainties linger over NASA's future access to the Dragon crew capsules following Elon Musk's spat with U.S. President Donald Trump. The effects of Mr. Trump's tariffs and his willingness to honour predecessor Joe Biden's commitments to India, given the major budget cuts he has proposed for 2026, are also unclear. And the ISS is set to be decommissioned by 2030. In this world, the future of India's own space programme is caught between multiple futures. NASA and private U.S. companies, including Blue Origin, have said they would like to use Gaganyaan technologies in future missions as part of strengthening U.S.-India ties in the space sector. But even as the country balances commercial with public sector needs, it needs to remain a relevant provider of space flight services. The Indian government has signalled that it is willing to take positive steps to bolster the private sector but which, thus far, have been inadequate. Thus, once Mr. Shukla returns, ISRO's to-do list will move to the next big challenge even as public expectations of it, including transparent communication, will soar.

GOVT ANNOUNCES BIHAR'S 1ST N-POWER PLANT

Bihar will be among the first six states in India will get its first atomic plant under the country's new Nuclear Energy Mission.

The Union Power Minister Manohar Lal Khattar announced a Small Modular Reactor (SMR)-based nuclear power plant in the state following the Centre's approval.

- The announcement comes ahead of assembly election in Bihar and comes after a meeting of eastern region power ministers, which included representatives from Bihar, West Bengal, Jharkhand, Odisha, and Andaman & Nicobar Islands.
- He confirmed that the Centre had accepted Bihar's request for a nuclear plant, stating: "If the Bihar government sets up a nuclear power plant, the Central Government is fully prepared to provide support." Khattar added that Bihar had formally requested such a facility and the Centre



would assist in its establishment. Details regarding the site and scale of the plant are expected to be finalised in the coming stages of project development.

- Announced in the Union Budget 2025-26 with a Rs 20,000 crore allocation, the Nuclear Energy Mission aims at expanding clean and reliable nuclear power across the country and strengthen regional energy security.

Do You Know:

- SMRs are a newer generation of nuclear technology designed to be more flexible and cost-effective than traditional large-scale reactors, experts say. They can be deployed in smaller grids and are considered safer due to their advanced design.
- For Bihar, which has historically struggled with power deficits and infrastructure challenges, the project represents a significant shift. Officials say the plant could help provide a more stable electricity supply and support the state's industrial ambitions.
- Alongside the nuclear plant, the Centre has also approved a 1,000 MW battery storage capacity project in Bihar, aimed at enhancing grid stability and supporting renewable energy integration. The government will provide viability gap funding of Rs 18 lakh per MW for this initiative.
- This focus on battery storage comes just days after Prime Minister Narendra Modi, during his visit to Siwan on June 20, laid the foundation stone for a 500 MWh Battery Energy Storage System (BESS) project in Bihar. Union Power Minister Khattar, while making the SMR announcement, also praised the Bihar government for its recent progress in the power sector, noting the installation of eight million smart meters and a significant reduction in technical and commercial losses.

INDIA NOT A MAGNET FOR GLOBAL SCIENCE, SAYS RAMAKRISHNAN

With the U.S. terminating several research programmes, firing thousands of federal scientists, and cancelling important, high-value federal research grants — \$8 billion already and further cuts of almost \$18 billion next year for National Institute of Health (NIH), proposed cuts of about \$5 billion next year to National Science Foundation (NSF), proposed cut of nearly 25% to NASA's budget for 2026, and billions of dollars cut in grants to several universities — many U.S. scientists are planning to move to other countries.

According to an analysis carried out by Nature Careers, U.S. applications for European vacancies shot up by 32% in March this year compared with March 2024. A Nature poll found that 75% of respondents were “keen to leave the country”.

‘Not competitive’

The European Union and at least a handful of European countries have committed special funding to attract researchers from the U.S. But since the committed funding is dwarfed by the scale of funding cuts by the U.S., and the funding is already highly competitive in Europe, senior scientists from the U.S. may not move to Europe in large numbers.

“There will be a few scientists who will move, but I do not see a mass exodus. Firstly, salaries in Europe are well below those in the U.S. Secondly, moving is always difficult both professionally and personally. Finally, the U.S. is still the pre-eminent scientific country, and that will be hard to walk away from. I say this as someone who actually did move from the U.S. to England over 25 years ago, with a salary that was just over half what I was making there,” Nobel Laureate

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



Venkatraman Ramakrishnan, professor at the MRC Laboratory of Molecular Biology, Cambridge, U.K., says in an email to The Hindu.

In comparison, India has only a handful of institutions, such as IISc, NCBS, TIFR, IISERs, and IITs, that can possibly attract U.S. scientists. According to him, even the renowned institutions in India are “world class only in some very specific areas”.

“I do not see India as a general magnet for international science,” Prof. Ramakrishnan adds.

Though funding for science in India has increased in absolute terms, the percentage of GDP allocated to R&D has actually reduced. India’s gross expenditure on R&D is estimated to be 0.6-0.7% of GDP in 2025. Specifically, with long-term assured funding for basic research, which is absolutely necessary to attract researchers based in the U.S., not guaranteed by existing programmes, can India take advantage of the situation in the U.S.? “India’s R&D investment as a fraction of GDP is much less than China’s and is about a third or less of what many developed countries have, and far below countries like South Korea. It will not be competitive without a substantial increase,” Prof. Ramakrishnan says.

Lack of funding

Prof. Ramakrishnan says: “Neither the funding, the infrastructure, nor the general environment in India is attractive for top-level international scientists to leave the U.S. to work in India. There may be specific areas (e.g. tropical diseases, ecology, etc.) where India is particularly well suited, but even in these areas, it will be easier for scientists to do field work there while being employed in the West.” Given a choice between some European country or India, he strongly vouches for Europe as being “far more attractive as a scientific destination”.

Some of the key pain points in Indian science are the delayed release of funds every year, research scholars not being paid scholarships for as long as a year, and whimsical ways in which science policies are changed with little discussion with scientists. Even the Ramalingaswami re-entry fellowship, which aims to support the return of early-career life scientists with at least three years of international postdoctoral training, has faced abrupt policy changes. Currently, there are no national policies to attract senior scientists from other countries. “If India is serious about attracting Indian scientists abroad to return, it needs to provide far better incentives. China has shown that with sufficient investment and a stable commitment, it can be done,” he says.

Funding in India is available mainly from the government agencies such as DBT, ICMR, DST, and SERB, with negligible private funding. In 2021, the government announced ₹50,000 crore for the Anusandhan National Research Foundation, which will replace SERB. In December 2024, Minister of State (Independent Charge) of the Ministry of Science & Technology and Earth Sciences, Dr. Jitendra Singh, in a written reply to the Lok Sabha, said that a budgetary provision of only ₹14,000 crore had been made by the government for 2023-2028. The balance ₹36,000 crore will have to be sourced through “donations from any other sources”, including public and private sectors, philanthropic organisations, foundations, and international bodies. “In many developed countries, the ratio of private to public investment is almost two or more. In India, it is almost the opposite. This is really a failing on the part of Indian industry,” Prof. Ramakrishnan adds.

Years ago, Singapore successfully attracted senior scientists to move permanently or as visiting fellows. He attributes this to high salaries with low taxes and excellent scientific infrastructure. On the societal front, Singapore is clean and well-run with first-rate schools, healthcare, mass transit, and safety, and has become a desirable destination for scientists from developed



countries, he adds. On the other hand, scientists moved from Germany to the U.S. and other countries in the 1930s because they were in significant personal danger.

'Temporary advantage'

To attract senior scientists from other countries and to encourage talented people already working in India, he stresses two critical aspects: scientific and social. "India needs a strong, stable commitment to science, which means not only much more funding but also more stable funding, much better infrastructure, and, just as importantly, insulating science from politics and excessive bureaucratic rules and regulations." About the social factors, he says: "The other detriment to attracting scientists (especially non-Indians) from abroad is India itself. Today, well-off Indians have essentially seceded from public spaces in India. Today, the streets are filthy and full of trash, the sidewalks are not navigable, and the air is unbreathable in most cities... Which non-Indian would want that sort of life for themselves and their children?"

He is, however, full of praise and appreciation for researchers in India contributing to science despite several challenges.

"I have many scientific friends in India, and I am always amazed by how they manage to do such good work in such difficult conditions, and yet be so cheerful. Young Indians are so bright and enthusiastic, but they are being let down by the country as a whole. India has a demographic dividend — it is one of the few large countries with a youthful population."

"However," he cautions, "this is a temporary advantage, and if India squanders it, it may find itself unable to be competitive in the future with other Asian countries and the West."

INDIA TRAILS IN CRITICAL TECH, PARTICULARLY SEMICONDUCTOR TECH

A new global index has been launched to assess how 25 countries perform across five technology sectors: AI, biotechnology, semiconductors, space, and quantum. India lags significantly behind the top three — U.S., China, and Europe — across most technology sectors.

Developed using public and commercial data, the Critical and Emerging Technologies Index allows policymakers to explore each country's relative strengths and weaknesses across these sectors.

To reflect strategic importance, the sectors were assigned default weights: semiconductors (35%), AI (25%), biotechnology (20%), space (15%), and quantum (5%). These were based on six criteria, such as geopolitical relevance and dual-use potential. India with a score of 15.2 is below France and above Russia, Canada and Australia.

The U.S. leads in all five sectors, powered by deep investments, a strong research workforce, and a decentralised innovation ecosystem spanning government, academia, and industry. Its dominance is most pronounced in AI, semiconductors, and space.

China is closing the gap, especially in biotechnology and quantum. China is backed by centralised planning, scale, and state-led investments. It still lags in semiconductors and advanced AI due to dependence on foreign tools and weaker private research.

Europe ranks third overall, showing strength in biotech and quantum but falling behind in semiconductors and space.



U.S. partnerships with Europe, Japan, and South Korea enhance its position, particularly in quantum and chips. However, no country has full control over the semiconductor supply chain. While the U.S. holds a clear lead in AI, China's advantage in data and talent, along with model breakthroughs, signals a tightening race.

The AI analysis is based on eight pillars, with the highest weight given to funding and talent. Technical factors such as algorithms, computing power, and data also play a key role, while regulation and global influence are included with lower weight. The U.S. leads this by a huge margin, followed by China and Europe.

The biotechnology analysis is based on nine pillars, with the highest weight given to human capital, funding, and core capabilities such as pharmaceutical production, genetic engineering, and vaccine research.

The semiconductor analysis uses eight pillars, with the highest weight given to chip design, funding, talent, and manufacturing. Other factors such as equipment, materials, and regulations are weighted lower as they play supporting roles. Taiwan, Japan and South Korea rank higher than Europe in this indicator.

The space analysis is based on 10 pillars, with the highest weight given to funding, talent, and defence assets. Key operational areas such as launch capability, navigation, and telecom are weighted slightly lower, while global influence and regulation receive the least weight. Russia is placed third in this indicator, and India seventh.

The quantum analysis uses eight pillars, with the highest weight given to funding, talent, and core technologies. Policy, global influence, and security are weighted lower.

VACCINATING INDIA

On the bright side, vaccine coverage globally, between 1980 and 2023, doubled for six diseases including measles, polio and tuberculosis. Also, at 75% globally, there has been a sharp fall in the number of zero-dose children — those who have not received the first dose of the diphtheria, tetanus, and pertussis (DTP) vaccine — during the same time period. The number of zero-dose children is a crucial performance marker and an indicator of vaccination coverage inequities. Despite increased immunisation coverage over the decades, in 2023, at 1.44 million, India, according to The Lancet, still had the second largest number of zero-dose children, and is among the eight countries with over 50% of the nearly 16 million zero-dose children globally. Most of the zero-dose children globally are in countries that are conflict-affected or with limited resources for vaccination programmes — India has neither of the two problems. However, about 23 million babies were born in 2023 in India, the highest in the world; in 2024, China, which has the second highest number of newborns globally, reported just 9.5 million newborns. Though the number of zero-dose children is staggering, when seen in the context of the number of newborns in 2023, the percentage of zero-dose children in India is 6.2%. A study in 2021 found that India had sharply reduced the percentage of zero-dose children, from 33.4% in 1992 to 10.1% in 2016. Before the COVID-19 pandemic, the number of zero-dose children was 1.4 million in 2019 but this swelled to 2.7 million in 2021 and then dropped to 1.1 million in 2022 before increasing to 1.44 million in 2023.

As in the 2021 study, a large percentage of zero-dose children are in Uttar Pradesh, Bihar, Maharashtra, Rajasthan, Madhya Pradesh, and Gujarat. There is also a relatively high proportion



of them in Meghalaya, Nagaland, Mizoram and Arunachal Pradesh. Over the years, the difference in zero-dose children based on gender, caste, and rural-urban status has reduced substantially. However, prevalence remains high among the poor, mothers with low education, Scheduled Tribes and Muslims. Focus is needed to immunise children in hard-to-reach tribal areas, urban slums where there is a huge migrant population, and in reducing vaccine hesitancy among Muslim households with newborn children. India has much work to do to meet WHO's Immunization Agenda 2030 (IA2030) — halving zero-dose children relative to 2019. With the number of zero-dose children in 2023 (1.44 million) only about nearly reaching the 2019 level of 1.4 million, India needs greater and sustained efforts to halve this number in the next five years.

WHAT ARE THE MOST COMMONLY USED CANCER DRUGS?

The story so far:

A major new investigation by the Bureau of Investigative Journalism, published by The Hindu, has revealed that cancer drugs shipped around the world to more than 100 countries have failed quality tests. But what are these drugs, and how are they used? Cancer is a disease characterised by uncontrolled cell growth. It is caused by mutations in genes disrupting or inhibiting the normal ways in which cells divide or die. This causes cancerous cells to develop – and when a mass of cancerous cells grows, it can form a tumour. Chemotherapy drugs disrupt this process, and these medicines have transformed the landscape of cancer treatment, improving outcomes for patients. The six types of drugs in our investigation — cisplatin, oxaliplatin, cyclophosphamide, doxorubicin, methotrexate and leucovorin — are all chemotherapy treatments.

What is cisplatin?

Cisplatin is a platinum-based drug that emerged in the 1960s from an unexpected discovery. Researchers found that a platinum-containing compound blocked the growth of bacteria, leading to the realisation that it could potentially be used to combat cancer.

Cisplatin works by binding to the DNA of cancer cells, preventing them from growing and dividing. It is particularly effective against testicular, ovarian, bladder, and certain lung cancers. Its introduction has improved survival rates for many patients, whether used alone or in combination with other therapies.

However, like all potent medications, cisplatin comes with side effects, including sickness, kidney damage, and hearing issues. Cisplatin also suppresses the function of the bone marrow, where new blood cells are produced. The resulting reduction in white blood cells has severe effects on patients' immune systems, leaving them vulnerable to infection.

What is oxaliplatin?

Oxaliplatin, like cisplatin, is a platinum-based drug. It also works by binding to and damaging the DNA of cancer cells. It is used mainly to treat the more advanced stages of colorectal cancer and following surgery for the removal of colon cancer, to wipe out remaining malignant cells.

Oxaliplatin comes with broadly similar side effects to cisplatin.



What is cyclophosphamide?

Cyclophosphamide is another key chemotherapy drug, often used to tackle diseases including breast cancer, some types of leukemia (a type of blood cancer), sarcoma (cancer of the connective tissues) and advanced lymphoma (cancer of the lymph nodes).

Cyclophosphamide disrupts the DNA of cancer cells. This limits their ability to replicate and mutate. It also causes a drop in white blood cells and can cause pain when passing urine due to inflammation of the bladder.

What is doxorubicin?

Often referred to as the “red devil” due to its striking colour and severe side effects, doxorubicin was derived from a type of soil bacteria called *Streptomyces* and was initially explored as an antibiotic.

Doxorubicin is effective against several types of cancer, including breast cancer, leukaemia, lymphoma and sarcoma. It works by interfering with the cancer cell’s DNA and disrupting the replication process. It is a staple in chemotherapy protocols, despite potential side effects including heart damage, risk of infection, skin changes and hair loss.

What is methotrexate?

Methotrexate is very effective against various cancers, including leukaemia, lymphoma and certain types of tumour. By inhibiting the protein responsible for creating new DNA molecules, it stifles cancer cell growth. Methotrexate is given in high doses, followed by leucovorin to help protect healthy cells from damage.

What is leucovorin?

Leucovorin, also known as folinic acid (not to be confused with folic acid), is a form of vitamin B9. It differs from the rest that were tested in the investigation in that it is not technically considered a chemotherapy drug, but a companion to chemotherapy. It was first introduced in the 1950s and was designed to manage the side effects of methotrexate, for which it is still used today.

FIGHTING ANTIMICROBIAL RESISTANCE WITH INSECT-BASED LIVESTOCK FEED

Traditional livestock production systems have severe environmental consequences, including high greenhouse gas emissions, extensive land and water use, and risk of fostering antimicrobial resistance (AMR). Together with the steadily rising demand for nutrition, global and regional food systems have been exploring alternative ways to sustainably maintain their supply chains. Insect-based feed has emerged as one promising candidate.

The Indian Council of Agriculture (ICAR) and its affiliated centres have already been strengthening the adoption of insect-based feeds in the country. In March 2023, the ICAR-Central Institute of Brackishwater Aquaculture (CIBA) signed an MoU with Ultra Nutri India, Pvt. Ltd. to explore the possibility of using insect-based feed in aquaculture. The aim was to use black soldier fly (*Hermetia illucens*) larvae as an ingredient in aqua-feed to improve growth and immunity.

In June 2024, CIBA and Loopworm, a Bengaluru-based manufacturer of insect-based proteins and fats, inked another MoU to evaluate the use of insect-based feed products in shrimp and Asian



seabass. In January 2025, the ICAR-Central Marine Fisheries Research Institute confirmed a formal MoU with Coimbatore-based Bhairav Renderers.

AMR and livestock production

Animal husbandry accounts for more than half of all antibiotic use around the world and is expected to increase to 200,000 tonnes by 2030, up 53% from 2013. Over the last 70 years, antimicrobial compounds have been becoming embedded in livestock feed. They are used to treat diseases as well as to boost growth, in turn raising productivity.

The excessive or inappropriate use of antibiotics in this regard can lead to AMR, which endangers public health. Traces of antibiotics left behind in the intestinal environments of livestock impose selective pressure for bacteria in the gut to acquire and maintain antibiotic resistance genes. These genes replicate when they are expelled into the surrounding environment, such as soil or water, increasing the possibility of human exposure, especially for those who work in agriculture.

It has been projected that the number of deaths worldwide from antibiotic-resistant infections will increase from 700,000 a year in 2014 to 10 million by 2050. The increasing demand for proteins of animal origin has in turn increased the costs of production and has encouraged farming practices to intensify. Ultimately, farmers are forced to use non-essential antibiotics to boost growth. The use of such antibiotics remains mostly unregulated in many countries, especially in LMICs.

The type and frequency of antibiotic-based animal feed consumption differs across continents and depends highly on socioeconomic conditions, regional demand and production, farming systems, and the national legislative framework. Some common antibiotics in use as feedstock in LMICs are chloramphenicol, tylosin, and TCN (a powdered mixture of oxytetracycline, chloramphenicol, and neomycin); developed countries have banned their use. In humans, over-exposure to these drugs can eventually increase the risk of kidney disease, cancers, and aplastic anaemia.

These realities prompted researchers to explore the use of insect-based feed to keep AMR at bay. As of today, 40 countries have accepted and issued regulations to use insect-based feed for animals. Examples of such insects include black soldier flies, house flies (*Musca domestica*), compost worm (*Perionyx excavatus*), grasshoppers (*Locusts*), small mealworms (*Alphitobius*), house crickets (*Acheta localus*), tropical crickets (*Grylloides sigillatus*), and Jamaican field crickets (*Gryllus assimilis*).

Pros of insect-based livestock feed

Insects are nutritious and are healthy additions to human and animal diet. They are good sources of fats, proteins, fibres, and micronutrients like zinc, calcium, and iron. In their natural habitat, both aquatic and terrestrial animals eat insects. Rearing insects emits less greenhouse gases than rearing other sources of animal protein.

In most cases, insects are raised on organic waste because they can quickly transform low-grade waste into high-grade crude proteins, fats, and energy. For example, to generate the same quantity of proteins, crickets consume 12-times less feed than cattle. Rearing insects also requires fewer resources, especially land and water, compared to other livestock production enterprises.

Insect-based livestock feed is also an attractive option because of its lower overall cost and the ease with which producing it can be made a sustainable activity. In other words, such feed has a better benefit-to-cost ratio in terms of production cost.



In fact, some studies have shown that the use of insect-based feed can be even more cost-effective because it provides better digestible proteins than fishmeal- or soybean-based feeds. For example, per one estimate, one kilogram of fish meal can be replaced with 0.76 g of crickets (75% crude proteins), 0.81 g of termites or silkworms (70%), 0.85 g of black soldier flies (66%), 0.91 g of locusts or yellow mealworms (60%), and 950 g of mopane worms (56%). Similarly, one kilogram of soybean meal (49% crude proteins) can be replaced with 0.74 g, 0.79 g, 0.83 g, 0.89 g, and 930 g of the same insect species, respectively.

The U.N. Food and Agriculture Organisation has estimated that food production will have to be increased by 70% by 2050 to meet the world's demand. Unregulated use of non-essential antibiotics increases the risk of antibiotic-resistant genes in livestock farms.

Research has outlined the potential for insect-based feed to become a climate-smart alternative to conventional feed because of its ability to shrink the environmental footprint of livestock farming. At the macroscopic level, the ICAR is still streamlining research and collaboration on insect-based feeds; all the same, efforts should be made at the system's periphery to raise awareness.

INFRASTRUCTURE DEFICIENCIES, SHORTAGE OF FUNDS AFFECTING ORGAN TRANSPLANTS: REPORT

The organ transplantation programme in India has been crippled by multiple issues, especially insufficient funds, shortage of specialised doctors, and procedural delays, a report released by the Union Health and Family Welfare Ministry dated June 19 revealed.

The report, which followed a high-level meeting of senior health officials to review the status of organ transplantation activities in government hospitals and identify the key challenges, pointed to infrastructure deficiencies, especially a shortage of intensive care unit (ICU) beds and lack of financial support to patients who required lifelong medication that was expensive.

Explaining the bottlenecks and other issues faced by state-owned institutions, the report said only 13,476 kidney transplants were performed, both in government and private hospitals, against the recommended one lakh cases last year. The capacity of government hospitals was not adequate to meet the target of organ transplants and creation of new centres were "definitely" required.

The report elaborated on the lack of facilities in government healthcare institutions, saying a significant number of government hospitals had reported the absence of dedicated infrastructure for organ retrieval and transplantation, including specialised transplant operation theatres and dedicated transplant intensive care units. A critical issue was the shortage of ICU beds, which were essential for maintaining potential brain-stem dead donors. In many trauma centres, beds were unavailable for potential donors due to high patient volume.

Many institutions, including All India Institutes of Medical Sciences, lacked in-house Human Leukocyte Antigen cross-matching laboratory facilities. The dependency on external laboratories was causing significant delays and logistical challenges in the transplantation process.

The report compiled by the National Organ and Tissue Transplant Organisation, which convened the meeting, said the shortage of specialised faculty, coupled with frequent transfer of trained personnel, was disrupting the continuity and establishment of transplant programmes. A major bottleneck was the scarcity of dedicated and trained transplant surgeons, nephrologists,



urologists, anaesthetists, neurosurgeons/neurologists, and intensivists within the government hospitals.

Burden on patients

On the paucity of funds, the report said some hospitals had reported inadequate funds to initiate or restart specialised transplant programmes. A significant concern was the high cost of immunosuppressant drugs, which patients must take for life. The financial support available under current schemes was often limited to the first year.

The report “strongly recommended that liver and heart transplantation, including the lifelong cost of immunosuppressants for post-transplant recipients, be comprehensively included under the central Ayushman Bharat Pradhan Mantri Jan Arogya Yojana [AB-PMJAY] scheme”.

INDIA SET TO INTEGRATE RARE-BLOOD DONOR REGISTRY WITH E-RAKT KOSH

In what would be a life, time and cost saving move for people with rare blood groups in India, the Union Health Ministry is looking at integrating the national Rare Donor Registry with the national online platform for blood bank management and blood availability information, e-Rakt Kosh.

The integration will allow those with rare blood groups to access a centralised system developed under the National Health Mission (NHS), providing details of blood banks, blood availability, and blood donation camps across the country. Essentially, it will help people find blood and blood banks, and assist blood banks manage their stock and donors.

“The Indian Council of Medical Research-National Institute of Immunohaematology (ICMR-NIIH), along with four partnering institutes, created a database of 4,000 carefully screened donors tested for over 300 rare blood markers. It helps doctors find rare and specially matched blood quickly. Rare Donor Registry of India (RDRI) platform has been developed to help patients across India,” said Manisha R. Madkaikar, Director, ICMR -NIIH, and Centre for Research, Management and Control of Hemoglobinopathies (CRMCH).

More access

She said the integration project would be taken up soon and offer more access and support to those with rare blood groups.

“The challenge is to ensure that we have a steady, motivated group of donors who stay connected to the blood banks,” she said.

Explaining how this registry for rare blood group helps, Dr. Madkaikar said that this system helped find rare matches as the registry included ultra-rare types such as the Bombay blood group, P-Null, and Rh-null blood group. It also helps ensure safer transfusions where matches are available for patients missing multiple antigens (common in thalassemia and sickle cell) to prevent complications.

“The group has also developed a special blood screening kit tailored for Indian patients and it uses DNA test (multiplex PCR) to quickly identify rare blood types,” Dr. Madkaikar said.

She added that in the past, this registry has transformed nearly impossible searches into life-saving solutions, and with its integration and reach, India could work towards ensuring that no life is lost due to lack of blood.



Working the area of effectively managing haemoglobinopathies, the ICMR-NIIH has developed a point-of-care test to detect life-threatening blood related genetic disorders.

“The Health Technology Assessments (HTA) led by Department of Health Research (DHR) and ICMR-CRMCH and NIIH helped cut the cost of sickle cell diagnostic kits from ₹350 to under ₹50 per test, saving the government nearly ₹1,857 crore,” said a note issued by the ICMR-CRMCH.

“India has developed testing for Haemophilia A and Von Willebrand Disease and now World Federation for Hemophilia has shown interest in procuring these tests for deployment in countries where the disease is prevalent. For India this new rapid, visual card testing device has made testing possible even at primary health centers,” Dr. Madkaikar said .

This upgraded testing is cheaper than what is currently available.

India has about 1.4 lakh haemophilia patients which is the second highest globally after Brazil. Haemophilia is a rare genetic disorder where the blood doesn't clot properly due to a deficiency in clotting factors.

The technology for the POC test for these conditions was transferred to the Bengaluru-based biotechnology firm Bhat Biotech which commercialised it under the brand name Bio-Scan in August 2023.

ALL ABOUT THE PROPOSED GLOBAL POTATO RESEARCH CENTRE IN AGRA

The Union Cabinet approved a proposal on Wednesday (June 25) to set up a regional wing of the Peru-based International Potato Centre (CIP), a premier research-for-development organisation with a focus on the potato and sweet potato.

- The proposed CIP-South Asia Regional Centre (CSARC) will come up at Singna in Agra district, and cater not only to farmers in India's potato belt states, like Uttar Pradesh, Bihar and West Bengal, but also to South Asian countries.
- UP Chief Minister Yogi Adityanath wrote to Union Agriculture Minister Shivraj Singh Chouhan on January 20, urging him to direct ministry officials to facilitate the early establishment of the centre.
- “Establishment of this centre will boost domestic potato seed production, thereby reducing India's dependence on seed imports from neighbouring countries”, the source added.
- The proposed Agra centre comes eight years after China set up a similar CIP wing. Known as the China Centre for Asia Pacific (CCCAP), it was established in Yanqing, Beijing, in 2017. The center serves China, East Asia and the Pacific regions.
- The proposed CSARC will be the second major international agricultural research institution to set up operations in India. In 2017, the Agriculture Ministry supported the establishment of a regional centre of the Philippines-based International Rice Research Institute (IRRI). The IRRI-SARC is established in Varanasi.

Do You Know:

- The potato is the third most available food crop in the world, after rice and wheat, while sweet potato is in the 6th position after maize and cassava. Though India is the second largest potato



producer in the world, followed by China, its average yield is 25 tonnes per hectare — about half of its potential of over 50 tonnes per hectare. A major reason for these low numbers is a lack of availability of high-quality seeds.

- India's sweet potato yield is just 11.5 tonnes per hectare, which is much less than the potential of 30 tonnes per hectare. With the establishment of the CSARC, India will have access to the largest global collection of germplasm (the cells or tissues from which a new organism can be generated) available with the CIP, a source said.
- China is the top potato producer and consumer in the world, followed by India. In 2020, China's production was recorded at 78.24 million tonnes, while India produced 51.30 million tonnes. Both countries together accounted for over one-third of the global potato production (359.07 million tonnes).
- In India, Uttar Pradesh (15 million tonnes), West Bengal (15 million tonnes) and Bihar (9 million tonnes) were the top three potato producers in 2020-21. Gujarat, Madhya Pradesh and Punjab also have significant production.
- As of now, at least two different ICAR centres work on tuber crops. While the Shimla-based ICAR-CPRI (Central Potato Research Institute) is working on the potato, the Thiruvananthapuram-based ICAR-CTCRI (Central Tuber Crops Research Institute) is working on the sweet potato.

CLIMATE FINANCE: INDIA TAKES LEAD IN CORNERING DEVELOPED NATIONS

In a small but important victory in climate negotiations, developing countries led by India have managed to force a reopening of discussions on the obligations of developed nations to “provide” finance, and not just make efforts towards “mobilising” financial resources, for climate action.

- The issue of climate finance was sought to be settled last year at the COP29 meeting in Baku, Azerbaijan, where developed nations had agreed to mobilise a sum of at least USD 300 billion per year from 2035. The figure is three times the amount that developed countries are currently obligated to raise, but well short of the USD 1.3 trillion a year that is the assessed minimum requirement of the developing countries.
- At the ongoing annual climate talks in Bonn, Germany, a formal ‘consultation’ was held on the issue Monday after developing countries made a united pushback, seeking inclusion of a dedicated agenda item to discuss the obligation of the developed countries under the 2015 Paris Agreement to provide financial resources to the developing countries.
- The Paris Agreement obligates the developed nations to both “provide” finance (Article 9.1) as well as “take the lead in mobilising climate finance” (Article 9.3). The two are related but independent obligations. One does not replace, or take precedence over, the other.
- The promise to mobilise USD 300 billion a year from 2035 sidesteps the obligation under Article 9.1. The developing countries had been extremely dissatisfied with last year's outcome in Baku, with India calling the USD 300 billion amount “abysmally poor”. Later, India had also said that it would be forced to temper the ambition of its future climate action if adequate amounts of climate finance was not provided for.
- In the run-up to the Bonn climate talks, which began last week, India enlisted the support of other developing countries in demanding that a separate agenda item be opened to discuss the



implementation of Article 9.1 of the Paris Agreement. The demand has been met with strong opposition from the developed nations who argued that the matter was already being addressed through various existing strands of negotiations on climate finance which made a new and standalone agenda item unnecessary.

Do You Know:

- Expressing deep concern at the lack of adequate financial resources being made available, India said the inability of the developed nations to fulfil their obligations was resulting in an erosion of trust. It said Article 9.1 of the Paris Agreement was not just a moral imperative, but a legal obligation and a commitment flowing directly from Article 4.3 of the UN Framework Convention on Climate Change (UNFCCC).
- The 1992 framework convention, the overarching international agreement that sets down the broad principles for global fight against climate change, makes it mandatory for the developed countries, in Article 4.3, to “provide new and additional financial resources” to meet the “agreed full costs” incurred by developing countries in taking climate action.
- The formal consultation will result in a ‘report’ that would be placed before a similar meeting during the COP30 climate conference that is scheduled to be held in Belem, Brazil towards the end of the year.
- The developing countries are hoping that at Belem they would manage to force the creation of a separate workstream to discuss the implementation of Article 9.1. While that may be some distance away, the developing countries can have the satisfaction of bringing climate finance back under the spotlight, and forcing a discussion that developed nations are generally averse to get into.

5 DEAD IN HIMACHAL FLASH FLOODS

Three bodies were recovered in Kangra on Thursday, taking the toll from flash floods triggered by cloudbursts to five, said officials.

- Search operations are on to find the missing persons — three each from Kullu and Kangra. Meanwhile, an unknown person died after drowning in a rivulet in Kullu on Thursday. The flash floods occurred in Kangra and Kullu districts on Wednesday.
- “Out of five, four were identified. As per the information provided to us by the contractor at the Hydroelectric power project, three people are still missing. Separately, a man, who had climbed up and entered a forest area to save himself yesterday from the increased water at the hydro power project site, was traced today,” said Deputy Commissioner (Kangra) Hemraj Bairwa.
- The three deceased have been identified as Chain Singh, a resident of Jammu & Kashmir, Aditya Thakur from Chamba, and Pardeep Verma and Chandan from Uttar Pradesh, Kangra SP Shalini Agnihotri said.
- Deputy Commissioner (Kullu) Torul S Raveesh, said a search was on for three persons who had gone missing on Wednesday in Sainj valley. “We have called the teams of National Disaster Response Force (NDRF) to assist,” he said.

Do You Know:



- While episodes of heavy rain are often termed “cloudburst”, a cloudburst has a specific technical definition — rainfall of 10 cm or more in an hour, over a roughly 10 km x 10 km area.
- Cloudbursts are more common in hilly areas because of a phenomenon called ‘orographic lift’, which basically means warm air rising up the side of a mountain. As warm air ‘climbs’ a mountain, it expands because of the low pressure above. The expanding air cools, releasing the moisture it was holding as rain. But if more and more warm air keeps rising, it prevents that rain, till a large amount of rain builds up and bursts out in a massive shower all at once.
- Because cloudbursts happen in localised areas (over a roughly 10 km x 10 km area), they are difficult to capture accurately.
- As the name suggests, a flash flood happens quickly, when a lot of rain suddenly enters into the drainage systems (waterbodies, drains), and water overflows. Flash floods are again more common in hills, because rocky terrain does not absorb water very well. While river floods, the kind normally seen in plains, last longer and cause more damage to property, the sudden flash floods are more likely to lead to loss of life.
- In India, flash floods are often associated with cloudbursts – sudden, intense rainfall in a short period of time. Himalayan states further face the challenge of overflowing glacial lakes, formed due to the melting of glaciers, and their numbers have been increasing in the last few years.

WHAT SPARKED THE KEELADI CONTROVERSY?

The story so far:

On June 17, archaeologist K. Amarnath Ramakrishna, whose excavation at Keeladi in Tamil Nadu drew the nation’s attention, was transferred yet again, this time from New Delhi to Greater Noida. Mr. Ramakrishna, who was serving as the Director (Antiquity) and as Director of the National Mission on Monuments and Antiquities (NMMA), will now be the Director of the NMMA only. The NMMA unit, set up in 2007, according to sources, remains almost defunct. Over two years after Mr. Ramakrishna submitted his 982-page report on the first two phases of excavations carried out at Keeladi between 2014 and 2016, a fresh controversy erupted last month. The Archaeological Survey of India (ASI) mandated that he revise his report, but he refused to do it. This disagreement sparked a political clash between the Centre and Tamil Nadu.

How did Keeladi excavation begin?

Keeladi has become a symbol of pride for many in Tamil Nadu. Over a decade ago, Amarnath Ramakrishna, then the ASI’s Superintending Archaeologist, had initiated excavations at a site known as the Pallichanthai Tidal in Keeladi, originally a coconut grove spanning 100 acres. He had identified over 100 sites for excavation along the Vaigai River, but Keeladi stood out.

It was in Keeladi that they unearthed over 7,500 ancient artifacts, including wall structures, drainage systems, and wells — all evidence of a sophisticated urban society that thrived. What was even more compelling was the carbon dating, which revealed that these elements are over 2,160 years old, dating back to the 2nd century BCE, which is the time of the Sangam period in Tamil history.



What made the findings significant?

Archaeologists were stunned by a few findings. Most importantly, there was no evidence of religious symbols at the excavation site, which hinted at the secular nature of the civilisation.

So, naturally, the excitement around Keeladi's discoveries was palpable. Tamil historians and enthusiasts saw it as proof of an advanced ancient Tamil civilisation, but soon after, things took a sharp turn.

What did political critics accuse the Centre of doing?

It all began in 2017, when the ASI transferred Mr. Ramakrishna to Assam just as the excavations were ramping up after the first two phases. Back then, political critics accused the Centre of deliberately derailing the excavations. It is because the Centre that had promised funding and support for further digs delayed both after the second phase.

The local political climate grew tense with some alleging that the Centre was trying to suppress Tamil heritage. By 2017, the excavations had entered its third phase, this time, under archaeologist P.S. Sriraman. After excavating just around 400 square meters, he reported a lack of continuity in the brick structures previously discovered.

Did State's findings resolve the issue?

The Madras High Court stepped in, with judges visiting the excavation site. The court then directed the ASI to continue the excavations and allowed the Tamil Nadu State Department of Archaeology to get involved. The department, in 2019, published a report asserting that Keeladi was an urban settlement dating back to the Sangam era between the 6th century BCE and the 1st century CE.

Since the third phase, the State Archaeology Department has continued the project, but these findings have not helped resolve the issue; instead, the drama has escalated. In January 2023, Mr. Ramakrishna, who was transferred back to Tamil Nadu, submitted his report on the first two phases of excavation.

What did the ASI ask Ramakrishna to do with the report?

For about two-and-a-half years, this report remained with the ASI, and just last month, the ASI sent Mr. Ramakrishna a letter to revise the report. The ASI questioned the dating and depth of certain findings, suggesting the evidence for the earliest period, as it "appeared to be very early," and said it needed further analysis. Mr. Ramakrishna, however, stood firm and refused to rewrite his conclusions, defending his work as scientifically sound, based on rigorous archaeological standards. He argued that the report's chronology was backed by stratigraphic sequences, material culture and even Accelerator Mass Spectrometry.

Why did the ASI's decision spark political outrage?

Against this backdrop, many political parties in Tamil Nadu have slammed the ASI's decision. They have termed it a blatant attempt to suppress Tamil heritage. They argued that the Centre's refusal to acknowledge Keeladi's significance was not just about science but also about politics. Amid the backlash, the Union Minister for Culture, Gajendra Singh Shekhawat, said Mr. Ramakrishna's findings were not technically well-supported and further scientific studies were required to validate the findings. He sought more results, data, and evidence because he said a single finding cannot change the entire discourse.



Why did AIADMK stay silent initially?

Interestingly, the AIADMK, which was in power when the Keeladi report was published, remained silent for a long time on the current controversy. However, on June 18, senior leader R.B. Udhayakumar contended that the Centre had sought more information by way of ensuring “additional corroboration.” He also said, “if the Keeladi report is rejected, the AIADMK will be the first party to express its voice of protest.”

The controversy is not just about one report or one excavation; it is a clash of narratives. The Centre insists on scientific validation while Tamil Nadu views it as a matter of historical recognition. The State government is pressing on with its excavations, which are under way, and it has already set up a new museum at Keeladi, drawing thousands of visitors.

FUNDING NOD FOR 1-YR PILOT TO MANAGE HUMAN-TIGER CONFLICT OUTSIDE RESERVES

With recurring human-tiger conflicts in certain forest divisions in the country, the Union Environment Ministry has given approval for funding for ‘tigers outside of tiger reserve’ pilot scheme to manage such conflict better through enhanced monitoring and protection.

- As per official documents, the executive committee of the National Compensatory Afforestation Fund Management and Planning Authority (CAMPA), under the Environment Ministry, approved in-principle funding on a pilot basis for one year for the scheme, under which 80 forest divisions across 10 states, identified initially on the basis of data of recurring human-tiger conflict, will get funds.
- This will be for technical interventions for protection and monitoring of tigers and co-predators, strengthening forest managers to address conflict with technology, collaborations with civil society and expert veterinarians, and augmentation of prey base.
- On ground, the scheme will be implemented by the Chief Wildlife Wardens of state forest departments, in close collaboration with the National Tiger Conservation Authority (NTCA). Asked about the initial rollout of the pilot, a government official said that NTCA was finalising the list of forest and wildlife divisions.
- The CAMPA’s executive committee also directed the NTCA, the scheme’s proponent, to furnish revised year-wise estimates and then seek approval from the governing body of CAMPA. The scheme’s proposed outlay till 2026-27 is `88 crore and it was initially announced and discussed on March 3 during the National Board for Wildlife meeting chaired by Prime Minister Narendra Modi.

Do You Know:

- The National CAMPA authority manages the monies collected in the national compensatory afforestation fund, in lieu of diversion of forest land for non-forest activities. The fund has also partly financed other wildlife projects such as the Great Indian Bustard recovery project and Project Cheetah.
- Outside tiger reserves, territorial and wildlife divisions are in-charge of wildlife protection. With nearly 30% of the country’s over 3,600 tigers outside tiger reserves, these tigers often prey on cattle and herbivores near human settlements, increasing chances of human interface and conflict. Being territorial, they also push out co-predators like leopards to areas outside forests, thus



adding to the conflict risk. Official data shows that 382 people were killed in conflict with tigers between 2020 and 2024, including 111 in 2022 alone.

- According to officials, this trend is often seen outside territorial forests in Chandrapur near Tadoba Tiger Reserve, Maharashtra, in the sugarcane fields near Dudhwa, Pilibhit in Uttar Pradesh, some divisions near Ranthambore, and Wayanad in Kerala.

OVER 50 MINES MAY BENEFIT AS SARISKA'S CRITICAL TIGER HABITAT TO BE REDRAWN

A plan drawn up to rationalise the boundary of Sariska Tiger Reserve's Critical Tiger Habitat (CTH) may offer a lifeline to over 50 marble and dolomite mines that were closed following a Supreme Court order last year due to their proximity to the CTH.

- If notified as proposed, the new CTH boundaries will retreat in multiple stretches, putting these mines outside the one-kilometre zone from the boundary, where mining and other activity is prohibited.
- The Rajasthan government's proposal has identified mostly hilly parcels, adding up to 48.39 sq km, as "peripheral degraded areas affected by human activities" that can be excluded from the CTH. To compensate, 90.91 sq km of "quality tiger habitat" in the Sariska buffer will be added to the CTH.
- "These areas moved from the CTH to the buffer will not be part of the sanctuary or national park. This conversion will help foster cordial relations between the local community and the tiger reserve management," the proposal said
- Of the 100 marble, dolomite, limestone and masonic stone quarries around Sariska, 43 had already been non-operational due to a lack of permits and other reasons, while 57 active mines were closed under the Supreme Court order last May.

Do You Know:

- The Supreme Court order in question came in a suo motu case regarding the issues of unrestricted entry of people on foot and private vehicles inside Sariska Tiger Reserve. In March 2024, the court asked its Central Empowered Committee (CEC) to submit a report on the issue. Reconstituted in September 2023 under the Environment ministry, the CEC expanded the scope of the report by including other issues such as village relocation, cattle grazing, staff strength and boundary demarcation.
- The issue of mining, however, was only mentioned once in the CEC's 79-page report: "The illegal mining activities are because of the poor demarcation."
- After Rajasthan accepted the CEC's July 2024 report in September, the Supreme Court asked the state in December to complete the boundary rationalisation process within a year, subject to its final approval.
- Asked why the CEC expanded the scope of its report, a member who spoke on condition of anonymity said the committee wanted to "resolve all contentious issues, including boundary rationalisation, that have been pending for too long".



DHOLE SPOTTED AGAIN IN ASSAM'S KAZIRANGA

The dhole, or Asiatic wild dog (*Cuon alpinus*), previously thought to be locally extinct, has been rediscovered in Assam's Kaziranga-Karbi Anglong Landscape (KKAL), according to a Wildlife Institute of India (WII) study published in the *Journal of Threatened Taxa*. Camera traps captured a single dhole six times in the Amguri corridor, 375 meters from National Highway 37 and 270 meters from the nearest human settlement, marking the first confirmed sighting in the region in 35 years. This finding underscores the ecological importance of wildlife corridors in supporting endangered species like the dhole, which requires large, undisturbed forest habitats. The KKAL, spanning 25,000 sq. km in the Indo-Burma Biodiversity Hotspot, also supports tigers, leopards, and elephants. Dr. Ruchi Badola, Dean of WII's Faculty of Wildlife Sciences, emphasized the need to protect these corridors from habitat loss and fragmentation to ensure the survival of lesser-known carnivores like the dhole, whose global range has shrunk to less than 25% of its historical extent due to habitat degradation, prey depletion, and retaliatory killings.

DOLPHINS AND WHALES CONTINUE TO WASH ASHORE IN KERALA

In less than a month, six marine mammal carcasses — four dolphins and two whales — have washed ashore on the Alappuzha coast in Kerala, sparking concern.

On June 23 and 24, two dead dolphins were found at Challi, near Punnappra. The carcasses were buried following autopsies.

The repeated washing ashore of whales and dolphins has raised alarm amid growing concerns over marine pollution following the sinking of the Liberian-flagged cargo ship MSC Elsa 3 off the Thottappally coast in Alappuzha on May 25 and a fire on board the Singapore-flagged container ship MV Wan Hai 503 off the Kannur coast earlier this month. The two incidents have sparked fears of potential oil spills and chemical contamination, as some containers are believed to contain hazardous materials.

BIHAR GOVT. CONSTITUTES TRUST TO BUILD TEMPLE AT SITA'S BIRTHPLACE

The Bihar government on Thursday formed a trust headed by the State's Chief Secretary for the construction and redevelopment of the temple at Punaura Dham, the birthplace of Goddess Sita, in Sitamarhi district that would be built on the lines of the Ram temple in Ayodhya.

The trust, titled Shree Janaki Janm Bhumi Punaura Dham Mandir Nyas Samiti, will come into effect with immediate effect, as per the gazette notification issued by the Law Department.

Chief Minister Nitish Kumar had on Sunday unveiled the final design of the Janaki temple on X.

The construction of a grand temple would not only fulfil the people's wish but also help promote tourism in the State, Mr. Kumar had announced during his Pragati Yatra across the State earlier this year.

While land measuring 17 acres was available on the Punaura Dham temple premises, the process is currently under way to acquire an additional 50 acres to develop the place.



FIRST BATCH OF PILGRIMS VISIT MANSAROVAR, APPEAL FOR MORE SLOTS

Context and Significance:

The Kailash Mansarovar Yatra, a significant religious pilgrimage for Hindus, resumed in 2025 after a hiatus since 2020 due to the India-China military standoff at the Line of Actual Control (LAC) and the COVID-19 pandemic.

Mount Kailash and Mansarovar Lake, located in China's Tibet Autonomous Region, are revered in Hindu scriptures, with the lake's waters believed to absolve sins and aid salvation.

The resumption marks a step in restoring people-to-people ties between India and China, a key aspect of bilateral relations often tested by geopolitical tensions.

Details of the 2025 Yatra:

The first batch of 36 Indian pilgrims, selected via a computerised lottery from 5,000 applicants, departed Delhi on June 15, 2025, and reached Darchen to begin the 52-km parikrama around Mount Kailash. The total journey covers ~2,000 km by road and rugged trekking at high altitudes (Mansarovar Lake at 4,588 meters).

Pilgrims completed the trek around Mount Kailash and the parikrama of Mansarovar Lake by July 11, 2025, and began their return journey on July 12, crossing into India on July 1.

Only 750 pilgrims were allowed in 2025, a sharp decline from 1,364 in 2019, due to restrictions negotiated between India and China's foreign ministries. The batch size was reduced from 50 to 36 due to medical test failures.

The yatra's history shows fluctuations in pilgrim numbers since its reopening in 1981. The Nathu La Pass route (Sikkim) was added in 2015, but LAC tensions (2020-2024) disrupted the pilgrimage.

SHORT NEWS

2025 SUSTAINABLE DEVELOPMENT REPORT (SDR)

— The 10th edition of the Sustainable Development Report (SDR) was published by the Sustainable Development Solution Network's SDG Transformation Centre. This year also marks the 10th anniversary of the adoption of the Sustainable Development Goals (SDGs).

— This year's SDG index covers 167 of the 193 UN member states with the focus on "Financing the SDGs by 2030 and Mid-Century".

— India, for the first time, breaks into the top 100 of the Sustainable Development Index with the rank of 99 and score of 67.

— According to the report, none of the 17 Global Goals are on track to be fully achieved by 2030, and only 17 per cent of the SDG targets are progressing as planned.

— This year, for the first time streamlined SDG Index (SDGi), which uses 17 headline indicators, one per SDG, to track overall SDG progress, was introduced.



Methodology: The SDG Index score is presented on a scale of 0 to 100 and can be interpreted as a percentage towards optimal performance on the SDGs. The difference between 100 and the country's SDG index indicates the distance that must be overcome to reach the optimum SDG performance.

2025 BLOOMBERG PHILANTHROPIES AWARDS FOR GLOBAL TOBACCO CONTROL

— India is among the six countries (including Mauritius, Mexico, Montenegro, the Philippines and Ukraine) that received 2025 Bloomberg Philanthropies Awards for Global Tobacco Control for prioritizing tobacco cessation approaches to reach a significant number of tobacco users in the country.

— The National Tobacco Control Cell of the Ministry of Health and Family Welfare, Government of India, was presented with the award at the World Conference on Tobacco Control held in Dublin, Ireland.

— India was presented the 'O' category award for promoting tobacco cessation. The 'O' is the MPOWER policy package of the World Health Organisation (WHO) that stands for 'Offer help to quit tobacco use.'

— The WHO Global Tobacco Epidemic 2025 report, developed with support from Bloomberg Philanthropies, was also launched on the occasion.

— Report reveals that the most striking gains have been in graphic health warnings, one of the key measures under the WHO Framework Convention on Tobacco Control (FCTC), that make the harms of tobacco impossible to ignore.

WORLD'S BEST SCHOOL PRIZE 2025

— A Zilla Parishad (ZP) school in Pune district's Jalindarnagar village has been shortlisted among global finalists for the World's Best School Prize 2025 in the category of Community Collaboration in education.

— Three other Indian schools – one each from Karnataka, Haryana, and Uttar Pradesh – have also been shortlisted under various categories for the award organised by UK-based international education platform T4 Education.

— Among the school's innovative approaches is the 'Vishay Mitra' (subject friend) initiative. This is a peer-learning model, where senior students mentor juniors, helping clarify doubts in a comfortable, student-led setting.

NATIONAL TURMERIC BOARD

— Union Home Minister and Minister of Cooperation Shri Amit Shah inaugurated the headquarters of the National Turmeric Board in Nizamabad, Telangana, on 29th June.

— The Centre has established the National Turmeric Board (NTB) in January this year. The government has set a target of achieving one billion dollars in turmeric exports by 2030.



— India is the largest producer, consumer, and exporter of turmeric in the world, with most of the product coming from Telangana, Maharashtra and Meghalaya. India has more than 62% share of world trade.

'BEEJ UTSAV'

The four-day 'Beej Utsav' (seed festival) held in the tribal belt of Rajasthan, Madhya Pradesh, and Gujarat emphasized the importance of indigenous seeds for agricultural sustainability. Over 9,400 tribal community members, including women and children, participated in events across 60 panchayats, learning seed preservation techniques and the value of seed heritage, biodiversity, and climate resilience. Activities included seed dialogues, biodiversity fairs, seed ball making, and plantation drives. Awards like 'Beej Mitra' and 'Beej Mata' honored farmers preserving seeds. Organized by community-led groups like Krishi Evam Adivasi Swaraj Sangathan and supported by Vaagdhara, the festival promoted seed sovereignty as a response to reliance on costly, chemical-dependent hybrid seeds. Vaagdhara's secretary, Jayesh Joshi, stressed that indigenous seeds symbolize identity, nutrition, culture, and climate resilience, urging tribal farmers to reclaim traditional practices to address climate change and food insecurity.

COASTLINE OF INDIA

— The length of India's coastline used to be 7,516 km, something that was ascertained in the 1970s. But this coastline has now been measured to be 11,098 km, an increase of 3,582 km, or nearly 48%. The main reason for such a big difference is in the scale of data used for measurement.

— The earlier measurement was based on data that were of the scale of 1:4,500,000 (one to forty-five lakh), or smaller. However, the recent exercise calculated the length of the coastline using data that had a scale of 1:250,000 (one to 2.5 lakh).

— Higher resolution data can capture the coastline, its bends and curves, in more intricate details. In low-resolution data, these details get smoothed out, and appear as straight lines. The loss of bends and curves would shorten the length.

PARAG JAIN

— The government appointed Parag Jain as the new chief of the Research and Analysis Wing (R&AW), India's external intelligence agency. Jain, a 1989-batch IPS officer of the Punjab cadre, succeeds Ravi Sinha, who retires on June 30.

— Jain was serving as the head of the Aviation Research Centre (ARC), the technical wing of R&AW, before his elevation.



BUSINESS AND ECONOMY

INDIA POSTS \$13.5 BN CURRENT ACCOUNT SURPLUS IN MARCH 2025 QUARTER

The country's current account balance recorded a surplus of \$13.5 billion, or 1.3 per cent of gross domestic product (GDP) in January-March 2025 quarter as against \$4.6 billion, or 0.5 per cent of GDP, in the same quarter of the previous fiscal.

- For the fiscal 2024-2025, the country's current account deficit was \$23.3 billion, or 0.6 per cent of GDP, compared to \$26 billion, 0.7 per cent of GDP during 2023-24, primarily due to higher net invisibles receipts.
- The current account deficit is the difference between exports and imports of goods and services. It is a key indicator of the country's external sector.
- In the financial account, foreign direct investment (FDI) recorded a net inflow of \$0.4 billion in January-March 2024-25 as compared to an inflow of \$2.3 billion in the corresponding period of FY2024. Net inflow under FDI at \$1 billion during 2024-25 was lower than \$10.2 billion during 2023-24.
- Foreign portfolio investment (FPI) recorded a net outflow of \$5.9 billion in Q4 FY2025 as against a net inflow of \$11.4 billion in the same quarter of FY2024. During FY2025, FPI recorded a net inflow of \$3.6 billion, lower than \$44.1 billion a year ago.
- Net inflows under external commercial borrowings (ECBs) to India amounted to \$7.4 billion in Q4 FY2025, as compared to \$2.6 billion in the corresponding period a year ago.
- Non-resident deposits (NRI deposits) recorded a net inflow of \$2.8 billion in fourth quarter of FY2025, lower than \$5.4 billion a year ago.
- There was an accretion of \$8.8 billion to the foreign exchange reserves (on a Balance of Payment basis) in Q4 FY2025 as compared to an accretion of \$30.8 billion in Q4 FY2024.

Do You Know:

- Gross Domestic Product (GDP) is an important macroeconomic indicator that measures the economic growth of a country. It is also an easy parameter for comparing the growth of a country with that of other countries in the world.
- GDP is the sum of the market value of all the final goods and services produced within the geographical boundaries of a country each year. If a country produces "n" commodities each year with quantities represented by q_1 to q_n and their corresponding market prices denoted as p_1 to p_n , then GDP is calculated by multiplying the price per unit with the total quantity produced and summing it across all goods and services. This is indicated in a mathematical format below:

$$GDP = (q_1 \times p_1) + (q_2 \times p_2) + (q_3 \times p_3) + \dots + (q_n \times p_n)$$

- GDP accounts for the value of only newly produced goods – goods produced during the year for which GDP is being calculated, normally taken as the financial year. For example, the price obtained from the resale of a house is excluded from GDP, as the house was not constructed in the year of estimation.



INDIAN ECONOMY RESILIENT AMIDST ELEVATED GLOBAL TRADE UNCERTAINTY: RBI BULLETIN

Amid heightened geopolitical and trade uncertainties, the Indian economy has exhibited considerable signs of resilience, a Reserve Bank of India (RBI) article said.

- “In this state of elevated global uncertainty, various high-frequency indicators for May 2025 point towards resilient economic activity in India across the industrial and services sectors,” the ‘State of the Economy’ article published in the RBI’s June bulletin said.
- The provisional estimates (PE) of national income released by the National Statistical Office (NSO) in May placed the country’s real gross domestic product (GDP) growth at 6.5 per cent for 2024-25, same as the Second Advance Estimates (SAE).
- The dual engines of the country’s growth — private final consumption expenditure (PFCE) and gross fixed capital formation (GFCF) — contributed 4 percentage points and 2.4 percentage points, respectively, to GDP growth.
- In terms of the quarterly trajectory, the Indian economy registered a growth of 7.4 per cent in Q4 FY25, notably higher than 6.4 per cent recorded in the preceding quarter. The pick-up in growth was mainly driven by fixed investment, which increased sharply to 9.4 per cent from a low of 5.2 per cent in the preceding quarter, owing to a sustained momentum in construction activity.

Do You Know:

- The article said that high-frequency indicators for May present mixed signals on aggregate demand. Urban demand showed signs of moderation as passenger vehicle sales declined with a sharp drop in the entry-level segment. However, rural demand improved as evident from the increase in the retail sales of two-wheelers.
- Overall economic activity remained robust in May 2025, with key high-frequency indicators like e-way bills, goods and services tax (GST) revenue, toll collections, and digital payments showing strong growth.
- GST revenue collections surpassed the Rs 2 lakh crore-mark for the second consecutive month in May, boosted by import-related GST receipts. Headline inflation, as measured by year-on-year changes in the all-India consumer price index (CPI), moderated to 2.8 per cent in May 2025 (the lowest since February 2019) from 3.2 per cent in April.
- Financial conditions remained conducive to facilitate an efficient transmission of rate cuts to the credit market. The article further said that foreign direct investment (FDI) inflows of \$3.9 billion in April 2025, more than double the level in April 2024. The country ranked 16th globally in FDI inflows and recorded \$114 billion in greenfield investment in digital economy sectors over the last five years (2020-2024), the highest among all countries in the Global South, it said.

STATISTICS MINISTRY TO CONDUCT FIRST-EVER HOUSEHOLD INCOME SURVEY IN 2026

The Ministry of Statistics and Programme Implementation (MoSPI) will conduct the first-ever Household Income Survey in 2026, with a Technical Expert Group (TEG) being set up to guide the ministry on the method of estimation and other aspects of the survey. In addition to measuring



household income, the proposed survey will also try to assess the impact of adoption of technology on wages, the statistics ministry said on Monday.

- The survey will be MoSPI's latest attempt to measure household income in India, with pilots conducted in the past not resulting in a nationwide survey due to difficulties in collecting reliable income data, the ministry said. These past attempts date back to the 1950s, when it tried to collect information on income as part of its consumer expenditure surveys on an experimental basis. Further attempts were made in the 1960s as part of the Integrated Household Survey.

- "However, these efforts were not continued as it was found that the estimates of income were lower than the estimates of consumption and savings put together," MoSPI said. In the 1980s, it was again explored if it was operationally feasible to collect household income data, but it did not lead to a national survey.

- According to MoSPI's latest Gross Domestic Product (GDP) data, India's per capita gross national income in 2024-25 was Rs 2.31 lakh in current prices, up 8.7 per cent from 2023-24.

- The expert group constituted on Monday will be chaired by economist Surjit Bhalla, formerly India's Executive Director at the International Monetary Fund and a part-time member of the Economic Advisory Council to the Prime Minister.

Do You Know:

- MoSPI, over the last couple of years, has conducted a variety of surveys to shed light on different parts of the Indian economy in addition to the regular ones that are used to compile key macroeconomic indicators such as GDP, Consumer Price Index, and Index of Industrial Production. These include annual surveys on unincorporated enterprises, the service sector, a forward-looking survey on private sector capital expenditure, and domestic travel and tourism, among others.

- Last month, the ministry released the result of its maiden monthly Periodic Labour Force Survey (PLFS), which had so far been conducted only on a quarterly basis for urban areas and annually for rural areas. The revamped monthly PLFS also seeks details about households' usual monthly income from rent, pension, interest, and remittances. However, the findings related to these details have so far not been released.

- Some of the key surveys whose results will be released over the next few months include the Annual Survey of Industries for 2023-24 and Household Social Consumption: Health.

TAX, SECURITIES NORM CHANGES MAKE BUYBACKS LESS ATTRACTIVE

A combination of taxation and regulatory changes has made Indian listed firms losing interest in buyback of shares. According to data shared by PrimeDatabase, there were only four share buyback offers, amounting to a total of ₹186 crore as of June 26, 2025. Last calendar year, this amounted to 38 offers with a total value of over ₹8,000 crore.

"As the data show, buybacks have completely dried up ever since the taxation rule change as per which has shifted the burden from companies to shareholders with effect from October 1, 2024 to bring it on a par with dividends," said Pranav Haldea, MD of Prime Database Group. "Buybacks have been negligible despite the bearish market which we had from October till March, during which buybacks typically thrive," Mr. Haldea said.



“Companies who might have wanted to buyback shares may have already completed it in September 2024 after the Budget announcement,” he added. “Companies which were considering a buyback may have accelerated their plans to launch before the new taxation rules came into effect,” he said.

The Centre had announced that with effect from October 2024, income from buyback of shares would be taxed on a par with income from dividends. Earlier, companies were paying a 20% buyback tax. If the income that shareholders receive is considered as dividend, then shareholders will have to pay capital gains.

This, experts said, may have made buybacks less attractive for shareholders and hence may not have led to such a demand even during a bear market.

Besides the North Block regulation, the markets watchdog might have also contributed to the trend.

“The reduction is primarily a consequence of SEBI’s regulatory changes. SEBI had been progressively reducing the option for companies to buyback their shares through the open market, and beginning this financial year, has eliminated it. Companies are now restricted to undertaking a buyback only via the tender offer route,” said Arindam Ghosh, partner at Khaitan & Co.

“It is possible that merchant bankers previously active in share buyback deals are facing challenges, given the recent regulatory changes by SEBI phasing out the open market buyback route,” he said.

REITS RIGHT FOR YOU?

Real estate transactions have been recorded long before financial markets were created. So, individuals have experience in buying and selling real estate well before understanding stocks and bonds. But investing in real estate needs large capital, making it difficult for many to invest directly in properties. Here, we discuss whether REITs (Real Estate Investment Trusts) are an optimal alternative to direct real estate investments.

The trade-offs

There is an emotional satisfaction of owning a physical asset. You can also continually raise rent to keep pace with inflation. The flipside is this investment is lumpy and illiquid. If you are a working executive, investment portability is crucial. This means the ability to move investments when you relocate for work-related reasons. For these reasons, it is worth considering REITs as an alternative to direct real-estate investments.

REITs are like mutual funds that invest only in real estate. They primarily earn rental income and pass on the income to unitholders every year. REITs are required to distribute 90% of the net distributable cash flows (NDCF) to its unitholders at least twice a year; NDCF refers to cash flows after deducting operating expenses and taxes. REITs can, hence, provide stable income to unitholders, assuming they have consistent occupancy rates. Importantly, the investment size in REITs is small. You can buy one unit of a REIT through a trading account. So, REITs convert lumpy illiquid investment into an affordable liquid asset. You must, however, be mindful of two factors before investing. One, REITs are not a direct bet on real estate as they are listed securities. So, they can fall in price when stock markets tank even if rental incomes are consistent or even if there is



a robust demand for rental properties. Two, REITs can't provide significant capital appreciation as they cannot significantly expand property portfolio as they distribute 90% of NDCF to unitholders annually.

Conclusion

Direct investment in land helps in generating capital appreciation whereas investment properties primarily provide rental income. You can consider REITs as an optimal alternative to rental properties, as they can provide stable income. Note REITs investing in commercial properties can have higher cash flow volatility than income earned from direct investment in residential properties. That said, before investing, you must analyse the portfolio of properties REITs hold, geographic mix, occupancy rates and past distributions.

INDIA NEEDS A STRATEGY TO DEAL WITH CHINA'S RESTRICTIONS ON EXPORTS OF RARE EARTHS

On April 2, US President Donald Trump unveiled his policy of reciprocal tariffs, targeting most of America's trading partners. Two days later, on April 4, China responded by announcing a 34 per cent tariff on all US imports, while also placing export restrictions on rare earths. Critical minerals and rare earth elements, which are used across several key sectors, ranging from electronics to renewables, automobiles and defence, are increasingly playing a vital role in the economy. For instance, lithium, nickel and cobalt are used in lithium-ion batteries. Dysprosium and neodymium, and tellurium, indium, and gallium are used in wind turbines and photovoltaic cells respectively. These minerals are central to the fourth industrial revolution. Restrictions over their supply, which can disrupt production processes across several sectors, have thus become central to the global trade war.

China holds a position of dominance. As per the International Energy Agency, the country accounts for a 35 per cent share in the refining of nickel, 50-70 per cent of lithium and cobalt and around 90 per cent for rare earth elements. China not only dominates the production of rare earths, but also has the most reserves. As per data from the US Geological Survey, the country's reserves have been estimated at 44 million metric tons. Brazil's reserves have been pegged at 21 million metric tons, India's at 6.9 million, Australia's at 5.7, Russia's at 3.8 million and Vietnam's at 3.5 million. Following the imposition of restrictions in April, China's exports of rare earth magnets fell sharply in May. The restrictions have led to panic across the world, with many staring at supply shortages in several sectors.

In India, for instance, auto majors have been vocal about their worries over supply being squeezed. As per reports, the domestic auto industry has asked the government to intervene in the matter. Other countries are also moving ahead to secure supplies. The framework agreed to by the US and China also involves the easing of rare earth supplies. Announcing the deal, Trump posted on a social media platform that "Full magnets, and any necessary rare earths, will be supplied, up front, by China." As per reports, EU leaders will also be pushing for supplies from China at a summit next month. Other countries such as Brazil, Saudi Arabia and Vietnam are said to be aggressively exploring this segment. In 2025, India launched a National Critical Mineral Mission to help achieve self-reliance in the critical mineral sector. Under this, the Geological Survey of India is expected to conduct 1,200 exploration projects by 2030-31. This issue needs to be tackled at multiple levels. The objective should be to secure supplies in the short term so as to prevent disruptions across industries, while also focusing on expanding domestic exploration, mining and processing and firming up alternative sources of supply.



EXPANSIONARY POLICIES IN A SLOWING ECONOMY

The Reserve Bank of India (RBI) has cut key lending rates in two successive meetings, indicating a significant expansionary shift. In April 2025, the repo rate was cut by 25 basis points, and a further 50 basis point cut was announced in the recent meeting in June, bringing the policy repo rate to 5.5%. The RBI forecasts GDP growth of 6.5% for 2025-26, and inflation within the band of 4% +/- 2%, indicating sufficient room for these rate cuts.

The reduction in inflation has allowed for this expansionary move. The expectation is that it will spur private investment and lead to increased growth rates. But these moves have come on the back of a similar expansionary move on the part of fiscal policy, that of the recent cuts in income taxes. The fact that expansionary fiscal policy is being followed by expansionary monetary policy necessitates questions regarding the policy mix.

Policy co-ordination

Both fiscal and monetary policy impact aggregate demand and inflation. By reducing interest rates by way of monetary policy, investments increase and vice versa. An increase in government spending or a reduction in taxes increases aggregate demand and consumption through fiscal policy. Increasing aggregate demand leads to rising demand for goods and services, thereby increasing labour demand and wages, eventually leading to an increase in inflation. Therefore, stable macroeconomic outcomes require co-ordination between fiscal and monetary policy. The effects of expansionary fiscal policy can be nullified through contractionary monetary policy; this occurred in the U.K. and the U.S., where the announcement of tax cuts were met with a reluctance on the part of monetary policy to further cut interest rates, citing the inflationary nature of such fiscal policy moves. When monetary policy becomes ineffective, expansionary fiscal policy is required. In the wake of the 2008 recession, when interest rates had hit zero, government spending was increased to bring full employment.

Currently, one can characterise both fiscal and monetary policy in India as being expansionary. The income tax cuts announced in February 2025 were forecast to provide a significant boost to the economy. This raises a serious question of economic policy co-ordination. If both policy moves work as they are intended to, it would imply a significant increase in inflation. Does the RBI foresee muted inflation risks even as consumption and investment demand both show an increase? Or has the consumption tax cuts failed to show any impact on output expansion, implying an increase in fiscal deficit in the future?

Muted growth

Inflation fell to a six-year low of around 3% in June, with early monsoons and a good harvest leading to a significant fall in the headline inflation rate. This has provided the RBI with sufficient room for a reduction in the interest rate, though headwinds, such as U.S. President Donald Trump's tariff wars and the growing conflict in Iran, loom on the horizon.

The economy does show signs of weakness. A recent SBI report indicated that credit growth has fallen to a three-year low of 9% in May 2025, while the unemployment rate has risen to 5.6% in May 2025 from 5.1% in April. Coupled with low inflation, these are indicative of an economy facing significant pressures on the aggregate demand front. The standard solution is to cut interest rates to boost investment in the face of slowing demand. What is of concern is the slowdown in the economy after the announcement of the income tax cuts. Households were expected to respond



to the windfall gain in their disposable incomes by increasing their spending, thus leading to rising aggregate demand and inflation. On the contrary, though growth is forecast to remain steady at around 6.5%, these indicators show that the momentum might just be flagging.

Once could make the argument that these policies take time for signals to be converted into outcomes. Households may only convert the tax windfall into consumption when it actually materialises. But there are two problems with this argument. Firstly, it violates a central contention that individuals are inherently forward-looking, and can discount future windfalls into current spending. This assumption is central to the theoretical framework underlying modern inflation targeting. Secondly, if individuals are not forward-looking, and will only consume in the future, it would imply a sudden increase in future inflation when both investment and consumption increase, necessitating a sharp reaction for future monetary policy.

Deficit fears

Sufficient cuts to interest rates might provide the boost to the economy that income tax cuts could not. However, there is another problem. If output does not rise sufficiently, it would lead to a fall in tax collections, and a rise in the fiscal deficit. The only way to maintain the deficit is to cut government spending. If the government decides to cut revenue spending and not capital expenditure, the impact might fall on vulnerable populations that depend on such spending. With rising power of monopoly capital and a sustained shift towards profits away from wages, relying on normal market mechanisms may no longer achieve the desired outcomes. Sustained government intervention bringing about increases in wages and consumption power for those at the bottom of society is the need of the hour.

BURNING AT BOTH ENDS: HOW SMOKING HITS HEALTH, RAISES TERM INSURANCE PREMIUM

American actress and singer Liza Minnelli once quipped, "Smoking is one of the leading causes of statistics." As witty as it sounds, the grim truth is hard to ignore, tobacco use remains one of the top causes of preventable death globally.

According to the World Health Organization, it is responsible for more than eight million deaths worldwide each year, including approximately 1.35 million deaths annually in India.

The health consequences of smoking are well documented. From lung cancer and cardiovascular disease to stroke and chronic respiratory issues, tobacco use leads to severe, often irreversible, damage. But what's less discussed is the financial burden it can bring, particularly when it comes to term life insurance.

Why smokers pay more

When you apply for a term insurance plan, one of the first things insurers assess is your smoking status. And the difference in premium can be staggering. For instance, a 35-year-old male living in Delhi could pay as much as 80–100% more for the same term plan if he is a smoker compared with a non-smoker.

For instance, a 35-year-old non-smoker will pay a monthly premium of ₹1,453 for a ₹1 crore term policy, while a smoker will pay about ₹2,905.

That's because smoking significantly reduces life expectancy, increasing the risk for insurers.



Life-threatening issues

Smokers are more prone to a host of life-threatening conditions, including various cancers, heart disease, and chronic respiratory ailments.

This elevated risk translates into higher premiums, as insurers factor in the likelihood of early claims.

Smoking habits outweigh job risk in premium assessment. While your profession also plays a role in determining your insurance premium, smoking is often a more critical factor. For example, a smoker working a low-risk job like a software engineer may still end up paying a higher premium than a non-smoker in a high-risk occupation, such as a construction worker or merchant navy officer. Insurers typically categorise applicants into two groups, smokers and non-smokers, regardless of other lifestyle or occupational risks.

Must buy term plan

There's a common misconception that smokers are ineligible for term insurance. That's simply not true. Smokers are eligible and, in fact, have even more reason to secure financial protection for their families. Given the elevated health risks, buying term insurance ensures that your loved ones are financially safeguarded in your absence.

Honesty matters

Disclose smoking habits upfront. It's crucial to be transparent about your smoking habits while purchasing a term plan. Non-disclosure or misrepresentation can lead to serious consequences.

If an insurer discovers withheld information, often through mandatory medical exams or tests that detect nicotine, the same may lead to claim rejection, cancellation of the policy, or even allegations of insurance fraud.

Frequent evaluation

Insurers don't just ask whether you smoke, they also evaluate how frequently and in what form you consume tobacco, whether it's cigarettes, cigars, or chewing tobacco.

Definitions of "smoker" also vary across insurance providers. Some classify anyone who has smoked within the last 12 months as a smoker, while others may extend that window to three years.

Try to quit

Also, consider quitting for better rates and better health. If you're considering buying term insurance, quitting smoking can help reduce your premium costs significantly.

Some insurers even offer revised premiums if you quit smoking after purchasing the policy, subject to evidence and re-evaluation over time.

It's an opportune moment to reflect on how quitting smoking can improve not just your health, but also your financial well-being. A single decision, like giving up tobacco, can ripple into long-term benefits for both you and your family.



DGCA FINDS LAPSES, SAFETY DEFICIENCIES AT MAJOR AIRPORTS

Comprehensive surveillance conducted at major airports including Delhi and Mumbai by aviation safety regulator Directorate General of Civil Aviation (DGCA) have revealed a number of concerning findings and inadequacies, including instances of reappearance of reported defects on aircraft, non-adherence to proper work order and safety precautions during aircraft maintenance, and defect reports not being recorded in aircraft log books, among others.

- In one instance, a domestic flight was held up by the DGCA team as the operating aircraft had worn tyres, and was allowed to depart only once the necessary rectification was done by the airline. Among other shortcomings, the regulator also observed that the central line marking of a runway at one of the airports was faded.
- Following its June 19 order on launch of a new framework for comprehensive special audits to assess the aviation ecosystem and strengthen aviation safety architecture, the DGCA initiated a focused assessment of the aviation ecosystem to strengthen safety measures across the sector.
- The framework was announced by the regulator a week after the deadly crash of an Air India Boeing 787-8 aircraft in Ahmedabad, in which 241 of the 242 people on board perished. There were a number of casualties on the ground as well. The crash is being investigated by the Aircraft Accident Investigation Bureau (AAIB).
- The surveillance findings included multiple cases where the reported defects re-appeared many times on the Aircraft, indicating ineffective monitoring and inadequate rectification action on the defects, the regulator said. The regulator, however, did not name the concerned airports, airlines, and other aviation ecosystem players. As per the framework announced for the comprehensive special audits, the DGCA is supposed to protect safety information, commercial data, and personal details during such exercises to foster open reporting and a positive safety culture.

Do You Know:

- According to the World Health Organization (WHO), approximately 1.19 million people die annually in road accidents, and between 20 and 50 million more people suffer non-fatal injuries. In comparison, the number of annual air crash fatalities has mostly been in the hundreds since 2005, according to the UN body International Civil Aviation Organisation (ICAO).
- Of course, almost every human today travels on roads compared to a tiny fraction of the global population using aircraft. But even if one were to take these numbers into account, air travel is still much safer than road travel.
- Between 2012 and 2022, there were only 0.001 passenger deaths per 100,000,000 miles onboard airlines, compared to 0.54 deaths on passenger vehicles, according to data compiled by the US-based non-profit National Safety Council (NSC). "Over the last 10 years, the passenger vehicle death rate per 100,000,000 passenger miles was... 1,000 times higher than for scheduled airlines," NSC said.
- Accidents per million departures in commercial flights went down from 4.9 in 2005 to 1.9 in 2023 (the year for which the ICAO last published data). Notably, the ICAO's definition of an aircraft accident is fairly broad, including even minor events where the aircraft is damaged and needs repairs, or temporarily goes missing.



LIFE AND SCIENCES

HOW SHUBHANSHU SHUKLA'S DRAGON SPACECRAFT DOCKED WITH THE ISS

Marking a major milestone for India's space ambitions, Group Captain Shubhanshu Shukla of the Indian Air Force successfully arrived at the International Space Station (ISS) aboard the SpaceX Dragon spacecraft on Thursday.

- The spacecraft achieved a smooth docking—known as a soft capture—with the ISS on Thursday, the PTI reported. The journey onboard the SpaceX Dragon began a day earlier from NASA's Kennedy Space Center.
- Shukla is part of a four-member crew on the Axiom Mission 4 (Ax-4), a private astronaut flight arranged by Axiom Space. This mission is particularly significant as it brings astronauts from India, Poland, and Hungary to the ISS for the first time in over four decades.
- The arrival of Shubhanshu Shukla on board the ISS is not just a personal triumph but a symbolic return for India to human spaceflight after 41 years.

Do You Know:

- The Axiom-4 mission, originally scheduled to launch in May, faced multiple delays because of weather and technical problems. A small uncertainty hung over the launch Wednesday as well, even after the astronauts had entered the capsule, as some updated data took time to get uploaded to the spacecraft's software. Shukla was seen shuffling and shaking his legs as he waited, and exulted mildly when the all-clear was announced.
- ISRO chairman V Narayanan who, along with a ISRO team, had been in the US since the start of this month for the launch, said he was extremely happy that the mission had finally launched after all technical problems had been addressed.
- The crew will remain at the orbiting laboratory for two weeks, during which they will carry out an extensive slate of scientific experiments and research activities.
- The Ax-4 mission is commanded by Peggy Whitson, America's most experienced astronaut and now a senior official at Axiom Space. Alongside Shukla, the team includes Tibor Kapu, a mechanical engineer from Hungary, and Slawosz Uznanski-Wisniewski, a radiation specialist and European Space Agency project astronaut from Poland.

WHAT IS A PERCENTILE?

On June 14, the results of the NEET-UG were declared. Among over 22 lakh candidates, Mahesh Kumar stood out with a score of 686 out of 720. Yet, his percentile was reported not as 100 but as 99.9999547. This number may seem puzzling. Why is the national topper in the country not awarded a 100th percentile?

Percentage vs percentile

A percentage is a straightforward measure of how much a student scores out of the total possible marks. For example, Mahesh's 686 out of 720 translates to roughly 95.27%. Based on the questions answered, it is an absolute measure, showing how much a student knew. A percentile,



on the other hand, is a relative measure. It tells us how a student performed compared to others. A 99 percentile means the student did better than 99% of the test-takers. It doesn't say how much the student scored, but where they stand in the crowd. This distinction becomes crucial in exams where lakhs of candidates participate. A mark of 640 might land in a higher percentile one year and a lower percentile the next year simply because the overall performance of the cohort changes. Percentiles help admission authorities compare students by relative performance.

How percentiles are calculated

The basic formula used to calculate percentile is: $\text{Percentile} = \frac{\{\text{Number of candidates scoring less than you}\}}{\{\text{Total number of candidates}\}} * 100$. This is why even the top ranker doesn't get a 100 percentile. For Mahesh, the number of candidates scoring less than him is 22,09,317 out of 22,09,318 (including himself). When multiplied by 100, that fraction gives a value that is very marginally below 100. This explains the seven-decimal-place result: 99.9999547. It also means that the 100 percentile is mathematically impossible under this formula. You can get very close, but never exactly 100. Interestingly, while a 100 percentile is impossible, a zero percentile is theoretically allowed. The lowest scorer, who performs worse than everyone else, will have zero candidates below them. This gives: $\text{Percentile} = \frac{\{0\}}{\{\text{Total candidates}\}} * 100 = 0$

One fascinating implication of the percentile system is that it reveals the scale of competition. If a student's percentile is 92.8571428, the number of digits after the decimal (in this case, seven) can hint at the total number of test-takers. This is because: $\text{Total number of candidates (approximately)} = \frac{\{1\}}{\{1 - (\frac{\{\text{Percentile}\}}{\{100\}})\}}$. A high degree of decimal precision is used to differentiate between students who are extremely close in performance. For example, a difference of 0.00001 in percentile could separate thousands of candidates in a large exam like NEET.

Across the world, many tests adopt percentile scoring systems. The GMAT, used for MBA admissions, reports raw scores and percentiles. The SAT and GRE also use scaled scores derived from statistical normalisation, often converted to percentiles for easier interpretation.

Implications and clarity

In tightly packed score ranges, even a half mark can create a significant shift in ranks. Percentiles, with their precision, reveal that shift clearly. A score of 95% may be in the 98th percentile, and 85% may be in the 70th percentile, depending upon the clustering of candidates. Percentiles, though abstract, paint the most accurate picture of where you stand, not just what you scored. In a country where aspirations often run higher than available seats, one's percentile shows the narrative of competition, effort, and performance relative to lakhs of others. It offers a clearer understanding that victory lies not in perfection in competitive exams but in being ahead of the rest.

AT BANGKOK EVENT, A COMMITMENT TO COUNT EVERY BIRTH AND DEATH

At the third Ministerial Conference on Civil Registration and Vital Statistics (CRVS) in Bangkok, Asia-Pacific governments committed to registering all births and deaths by 2030, advancing universal, inclusive, and resilient CRVS systems. CRVS involves the continuous, compulsory recording of vital events like births, deaths, marriages, and divorces, which provide legal identity, access to rights, and services such as healthcare, inheritance, and insurance. The UN's ESCAP initiated the "CRVS Decade" in 2014 to ensure universal registration, reducing unregistered



children under five from 135 million in 2012 to 51 million by 2024—a 60% drop. Currently, 29 countries achieve over 90% birth registration annually, and 30 for deaths, with improved cause-of-death reporting. However, 14 million children and 6.9 million deaths remain unregistered yearly.

The conference extended the CRVS roadmap to 2030, emphasizing digital transformation, gender equity, data privacy, and interoperable systems. In India, the Registrar-General oversees CRVS, supported by the Ministry of Health. Despite challenges like low awareness and coordination, India's birth registration rose from 86% to over 96% through initiatives like digital registration software, data digitization with UNICEF, and amendments to the 1969 Registration of Births and Deaths Act. These enable electronic document storage via Digilocker and mandatory cause-of-death reporting. India's digital leadership was praised, though technology remains a barrier in some nations. The conference highlighted the role of CRVS in protecting vulnerable populations, combating child marriage, trafficking, and exclusion, aligning with SDG 16.9 for legal identity. Children at the event urged overcoming bureaucratic barriers to ensure universal registration, with regional progress driven by shared commitment.

WOMAN AT THE HELM

The first African and the first woman head of the largest, most powerful sporting organisation on the planet, Kirsty Coventry, 41, broke new ground in more ways than one when she formally took charge of the International Olympic Committee (IOC) on Monday. Also the youngest president since Pierre de Coubertin, the founding father of the modern Olympic Games, and hand-picked by outgoing IOC president Thomas Bach, Kirsty was largely seen as a symbol of continuity with Bach, now IOC honorary president for life, remaining the power centre. But in the last three months since her election, the handover period, those working with her at the IOC headquarters in Lausanne shared the belief that she was her own person. While there is likely to be continuity in some areas, Kirsty's experiences, as a white woman athlete in racially tense Zimbabwe under Robert Mugabe and a Minister in Emmerson Mnangagwa's cabinet, indicate that she is likely to be a lot more consensual and humane when compared to the strict Bach. It means that she is unlikely to rush into decisions on complex issues be it protecting female athletes, transgenders in women's sports, the scourge of doping, the relevance of the Olympic movement, attracting new sponsors and maintaining a balance between traditional competitive sports and experimenting to bring in new audiences, something that has not always worked, as evident with breakdancing in Paris.

Off the field, it will be an eventful eight years for one of Africa's most decorated Olympians. There will be big decisions to make including the possible return of Russia to the Olympic fold. In the run-up to the 2028 Olympics in Los Angeles, she will have to deal with U.S. President Donald Trump a lot more. The political uncertainties and global conflicts will force her to do a lot more than administering only world sports. The Russia-Ukraine war and growing hostilities in West Asia could have a bearing on the hosting rights for the 2036 Olympics, something that also brings Indian interests into the equation. On Monday, IOC member Nita Ambani was among the closest allies of Kirsty during and after the formal ceremony. A two-day closed-door session with IOC members to exchange ideas and opinions will be crucial to gauge initial impressions. The political situation, in the immediate context, may also have a bearing on the possible bids by Qatar and Saudi Arabia, two countries with deeper pockets than any and with growing interest to host the Games. With little experience in navigating the complex administrative labyrinth of world sports, Kirsty would be hoping to make a splash with her dive into the deep end.



COMPENSATING THEFT

Large language artificial intelligence models are fuelled by content on the Internet, and much of this content comprises news reports gathered, curated and published by media professionals and organisations with decades of experience. As creative industries reckon with their labour getting diffused into unaccountable clusters of graphics processing units that reproduce styles and spit out human-level artwork in mere seconds, the news industry has reason to fear the compounding of permission-less innovation into an existentially threatening heist of several lifetimes of work. Previous waves of digitisation peeled away captive audiences from print and broadcast media by replacing these with a web-charged attention economy, and Big Tech platforms further squeezed news media's place in these rapid transformations by often short-changing the very sources of information that their businesses relied on to be useful to the public. In a landscape where even precarious business models in the Internet age are threatened by a reluctance to pay for news and declining public trust in professional news-gathering, AI may very well be a body blow. It is clear: AI firms, with their billions in market capitalisation, must not be permitted to just take what they want from the Internet, synthesise these inputs into monetised insights, and pretend that the whole process is a form of victimless, innovative progress. Publishers have a clear right to decide who gets to Hoover up their entire corpuses, and to ensure that their businesses benefit from the AI wave. To this end, the Department for Promotion of Industry and Internal Trade's committee on copyright and AI is a welcome step.

This is not a decelerationist, or "decel" demand, as those who advocate for rapid AI development might be quick to say. The news industry has fought as search giants and social media companies profited enormously on the back of its content and set the terms for how the financial benefits flowed back to it. That cannot be permitted to happen — as social media platforms turn more and more into video-focused walled gardens, discouraging even a step outside their apps. For the news organisations, the avenues to earn are shrinking. As AI-generated overviews of news content with source links are reduced to a footnote, it is time for compensation to be negotiated at the time of publishers' content being scraped from their websites in the first place. AI firms may claim "fair use" in model training, but there is nothing fair — morally or legally — about accessing and disseminating troves of news without taking the creators and processors into confidence. News publishers and policymakers must now fight for their share in the AI era.

DOES CHATGPT MAKE HUMANS DUMBER? THE PICTURE IS MORE COMPLICATED

From at least the mid-15th century, with the invention of the printing press, a wave of anxiety has accompanied every new technology around the creation and dissemination of the written word. Pens, typewriters, computers, the internet and search engines and, most recently, large language models (LLMs) like ChatGPT — each technology was seen by its critics as somehow diluting the purity of the relationship between thought and word. This anxiety peaked with the sudden and widespread rise of LLMs and their ubiquity in knowledge production, especially by students and researchers. Unlike earlier technologies, which were tools that assisted either the physical act of writing or, as with search engines, made research and referencing easier, AI models can "think" for the user. According to a study conducted at the Massachusetts Institute of Technology (MIT), published earlier this month, the use of ChatGPT for writing incurs a considerable "cognitive debt".

Nataliya Kosmyna and other researchers divided test subjects — who had to write essays — into three groups: Those who used only their brains to write, those assisted by search engines, and those who used ChatGPT. Participants also switched roles to ensure more robust results. The



neural activity of all three groups was monitored over four months. The group using LLMs showed considerably lower cognitive engagement with their writing, had less ownership over their work and remembered less than their counterparts. For many, these findings conform to the broader panic around AI. The fear that AI will replace intellectual labour like automation did in manufacturing is exacerbated by evangelists like OpenAI CEO Sam Altman. In a recent essay, Altman wrote, “ChatGPT is already more powerful than any human that has ever lived.”

Both the MIT study and Altman might be overestimating the consequences of AI. While the cognitive effects of relying completely on an LLM might be adverse, there are ways to use it effectively. The act of writing — good writing, at least — is not about regurgitation of facts but rather about ways to collate, analyse and express. This training is important for intellectual development, but that does not mean it cannot incorporate new tools. The stage when AI is integrated into learning is also important. School students, for example, are still taught how to do long division even though they will likely use a calculator in adulthood. LLMs can be useful for “language” tasks — correcting grammar, summarising texts, helping with tone and tenor — without replacing or diminishing the author. The issue is not whether to use AI but how to. The rapid growth of AI means that research into its effects is still playing catch-up. The lessons from the social media boom, and the issues that appeared in its wake, highlight the importance of narrowing this gap.

ASIA WARMING NEARLY TWICE GLOBAL AVERAGE, HIT HARD IN 2024: WMO

Asia experienced its warmest or second warmest year on record in 2024, with its average temperature 1.04 degree Celsius above the last 30-year average, according to a new report by World Meteorological Organization (WMO). The continent is warming up nearly twice as fast as the global average, the report said.

- The impact of this high rate of warming in 2024 manifested through a range of extreme weather events such as 29 tropical cyclones, prolonged and intense heat waves and extreme rainfall events, including India.
- These weather events also caused substantial loss to local communities and economies at large, said the State of Climate in Asia 2024 report, prepared by WMO in collaboration with regional and international meteorological organisations.
- Professor Celeste Saulo, Secretary-General, WMO, said the report highlighted how changes in key climate indicators such as surface temperature, glacier mass and sea level will have major repercussions for societies, economies and ecosystems in the region. “Extreme weather is already exacting an unacceptably high toll,” she said
- According to the report, the surface temperatures were warmer than average for almost the entire region, particularly from western China to Japan, over the Indochina Peninsula, the Middle East and central northern Siberia. Japan, for instance, experienced its warmest year on record, exceeding the previous record set in 2023.
- The region was hit by intense land heat waves as well as marine heatwaves. East Asia saw prolonged heatwaves from April to November, and the monthly average temperature records were shattered in Japan, Republic of Korea and China.

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- In India, extreme heatwaves caused over 450 deaths across the country, the report said. During heatwaves in 2024, temperatures were in the range of 45-48 degree Celsius for sustained periods and touched a high of 50 degrees at some locations. The country also saw deadly lightning events, killing about 1,300 people, the report said.
- Asia's strongest and deadliest tropical cyclone in 2024 was Yagi. It impacted the Philippines, Vietnam, Hong Kong, Macau, China, Laos, Thailand and Myanmar, and according to estimates the damages ran into billions of dollars. While three tropical cyclones – Remal, Fengal, Dana – made landfall in the Indian sub-continent and killed about 90 people, cyclone Asna originating from Arabian Sea caused flooding in Gujarat and killed about 50 people.
- In terms of extent, marine heatwaves created a record in 2024, impacting an area of nearly 15 million square kilometres. The northern Indian Ocean, adjacent to Japan and the Yellow and East China seas faced particularly severe or extreme intensity of marine heatwaves.
- Glaciers continued to lose mass, as per the report, with 23 out of 24 glaciers in the High Mountain Asia region of central-south Asia spanning Himalayas, Pamir mountains, Karakoram, Hindu Kush.
- In terms of rainfall, above normal rain was observed in Arabian desert, Balochistan, parts of Myanmar, certain islands in Japan and even in Siberian plains. Very heavy rainfall affected western Asia in mid-April with daily rainfall in some areas exceeding long-term annual average rainfall.

TWO BILLION PEOPLE DON'T HAVE SAFE DRINKING WATER

In the time it would take me to write the next sentence, I could get up, walk to the kitchen, and pour myself a glass of clean water. I've never had to worry about whether that water would make me sick. Almost six billion other people in the world share this reality. They have safe drinking water in their homes.

That still leaves two billion people without. If people don't have safe water, what are they drinking? Before we get into it, it is important to understand how levels of drinking water services are defined and how many people fall on each 'rung' of the ladder.

For someone to have 'safe drinking water', their water source needs to meet three criteria: it needs to be free from contamination, located at home, and available whenever needed. Again, this is the reality for almost six billion people. So, what are the other two billion drinking? If you had asked me in the past, I might have guessed that they were collecting water from streams or lakes. The world was binary: you either had safe piped water or were collecting it from a river. But that is not the reality: only around 156 million people get their water this way (1.4% of the global population).

Around three-quarters of the two billion people do have access to a piped water source or protected well that is probably safe to drink. But it is either not located in their home, is not always available, or there is no guarantee it is completely contamination-free. That usually means they must travel to get there.

'Safe drinking water' became the main indicator of progress on clean water only in 2017. Before that, the focus was on the number of people who had access to an 'improved water source'. An improved water source can potentially deliver safe water: it is a protected pipe, spring, borehole, or other system that probably delivers safe water. The problem is that it doesn't guarantee the water is safe at the point of consumption. Imagine you collect a bucket of water from a pipe an



hour from home. It might be safe when you collect it, but once you have trekked back and left it sitting in the heat for the rest of the day, there is no guarantee that it is free of pathogens when you drink it the next morning.

That is the key point here. 95% of the world uses an improved water supply. As Map 2 shows, the majority in every country does, even in the poorest countries. Many countries have rapidly increased this share in the last few decades.

Countries can quickly increase access to a (probably) clean piped, spring, or borehole source. The biggest challenge is getting those pipes into each individual household and making sure that the source is completely contamination-free. This often means expanding a single community-shared pipe into a whole water network. But to get universal access to safe drinking water, this is what the world will need to do.

Unsafe water leads to more than 8,00,000 deaths every year. This is because it can lead to the spread of diarrheal diseases, such as cholera or dysentery, and other diseases, including polio and hepatitis. It can also lead to malnutrition, which is attributed to half of all childhood deaths.

These deaths tend to be concentrated in lower-income countries where fewer people have safe water to drink. In some of the worst-off countries, more than 5% of all deaths are attributed to unsafe water.

US PULLS FUNDING FROM GLOBAL VACCINES GROUP, RFK JR SAYS IT HAS 'IGNORED SCIENCE'

U.S. Health Secretary Robert F. Kennedy Jr. says the country is pulling its support from the vaccines alliance Gavi, saying the organization has “ignored the science” and “lost the public trust.”

- Kennedy, a longtime vaccine skeptic, mentioned Gavi’s partnership with the World Health Organization during COVID-19, accusing them of silencing “dissenting views” and “legitimate questions” about vaccine safety. His speech also cast doubt on the diphtheria, tetanus and pertussis vaccine — which WHO and other health agencies have long deemed to be safe and effective.
- Gavi said in a statement Thursday that its “utmost concern is the health and safety of children,” adding that any decision it makes on vaccines to buy is done in accordance with recommendations issued by WHO’s expert vaccine group.
- Some doctors in the United States criticized the decision. Dr. Paul Offit, director of the Vaccine Center at the Children’s Hospital of Philadelphia, said it was “incredibly dangerous” and warned that defunding immunization would put millions of children at risk.

Do You Know:

- Gavi is a public-private partnership including WHO, UNICEF, the Gates Foundation and the World Bank, and it is estimated that the vaccination programs have saved 18 million lives. The United States has long been one of its biggest supporters; before President Donald Trump’s re-election, the country had pledged \$1 billion through 2030.
- In just under four minutes, Kennedy called on Gavi “to justify the \$8 billion America has provided in funding since 2001,” saying officials must “consider the best science available, even when that



science contradicts established paradigms.” Kennedy said until that happens, the U.S. won’t contribute further to Gavi.

- Gavi said scientists had reviewed all available data, including any studies that raised concerns, and that the diphtheria, tetanus and pertussis vaccine has “played a key role in helping halve childhood mortality.”
- Some observational studies have shown that vaccinated girls do have a higher death rate compared to unvaccinated children, but there is no evidence the deaths are caused by the vaccine. But Offit said the studies cited by Kennedy were not convincing and that research examining links between vaccinations and deaths did not prove a causal connection.

GLP-1 DRUGS & WEIGHT LOSS

Danish pharmaceutical giant Novo Nordisk launched its blockbuster weight-loss injectable semaglutide earlier this week, months after its competitor Eli Lilly’s tirzepatide hit Indian markets — and nearly four years after these GLP-1 therapies took the United States by storm.:

- The bottom line is this: these drugs have been shown to be extremely effective for weight-loss, helping people lose 15% to 20% of their body weight, equivalent to what they would otherwise lose with bariatric surgeries.

- Both semaglutide and tirzepatide belong to a new class of medicines called GLP-1 (glucagon-like peptide-1) receptor agonists. They are prescribed for the management of type-2 diabetes and obesity.

- These drugs mimic certain naturally-occurring gut hormones called incretins (GLP-1 is one such incretin) produced in the small intestine, and are hence also known as incretin mimicker.

- They work by:

(a) improving the secretion of insulin that allows more of the glucose in the bloodstream to enter cells where it can be used for energy;

(b) inhibiting the secretion of the hormone glucagon that stimulates the liver to release stored glucose into the bloodstream;

(c) slowing down the emptying of the stomach so that the glucose levels in the bloodstream doesn’t spike; and

(d) reducing appetite by signalling to the brain that one is satiated.

- Semaglutide and tirzepatide both mimic the action of GLP-1. Tirzepatide additionally also mimics the action of another hormone called glucose-dependent insulinotropic polypeptide (GIP).

- While incretins were known as early as 1906, research into these gut hormones was overshadowed by the discovery of insulin in 1921. The substance produced by the pancreas has been used to manage diabetes for the past century.

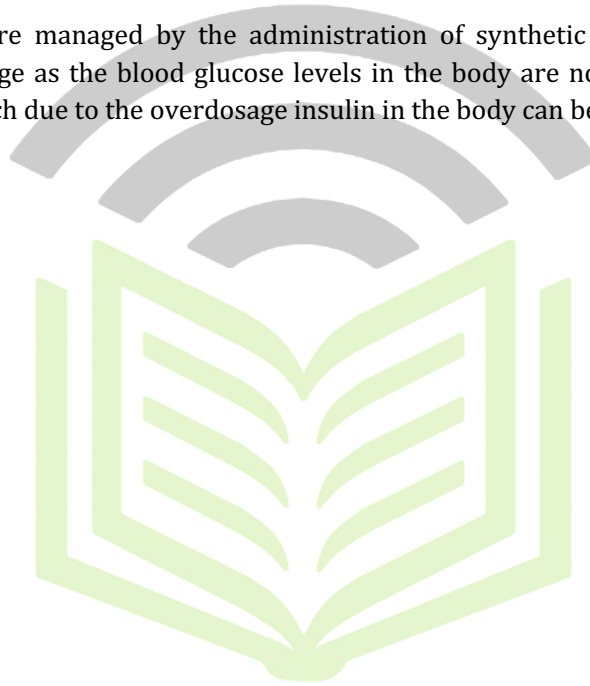
- Tirzepatide, which uses an additional target gastric inhibitory polypeptide (GIP), has been shown to lead to a weight-loss of up to 20% of the body weight. The medicine was also approved for the treatment of obesity-related obstructive sleep apnoea — a condition where a person’s breathing stops and starts while they sleep.



- Oral GLP-1 drugs such as orforglipron and danulipron may soon be available as well. Two other drugs, which use two targets GLP-1 RA and glucagon — Survodutide and Mazdutide are also in phase 3 clinical trials.

Do You Know:

- There are two kinds of diabetes. Both are related to the body's ability to synthesise and react to insulin, the hormone that breaks down sugar in the blood to produce energy.
- Type 1 diabetes, which often starts in childhood, occurs when the pancreas do not produce insulin (or enough insulin). Type 2 diabetes sees the cells of the body develop resistance to insulin, meaning greater amounts are reequred that what is produced by the pancreas.
- Both conditions are managed by the administration of synthetic insulin. But this poses a fundamental challenge as the blood glucose levels in the body are not constant. Blood glucose levels falling too much due to the overdosage insulin in the body can be life-threatening



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