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INTERNATIONAL

IS THE WAR IN UKRAINE ESCALATING?

The story so far:

With the war on Iran destabilising the global economy, the war in Ukraine seemed to have slipped off the news headlines. However, recent developments indicate that the war is escalating into a more dangerous and highly volatile phase.

What has changed?

In May 2026, with ground operations at a stalemate and forward movement stalled on both sides, Russia and Ukraine launched long-range aerial campaigns on each other. Both sides began targeting each other's civilian infrastructure. Ukraine scaled up its drone attacks to strike deep into Russian territory and targeted Russian economic lifelines, specifically oil refineries like the Ilsky and Novoshakhtinsk facilities as well as military logistics hubs.

Reports suggest that European nations are helping Ukraine to co-develop and mass-produce long-range missiles and attack drones, including through joint ventures. On May 21-22, a Ukrainian strike hit an educational complex in the city of Starobilsk (in the Luhansk Oblast which is Russian-held), killing 21 people (primarily young girls) and injuring 44 people. In response, Russia launched one of its fiercest drone and missile attacks across multiple cities in Ukraine, damaging civilian infrastructure and killing at least five people while injuring over a hundred people.

Russian authorities have also been publicly threatening to increase attacks in Kyiv. Again, on May 29, a drone hit a building in the Romanian city of Galati, which is seen as a violation of NATO airspace. Russia has denied responsibility. But this development throws open the possibility of NATO getting drawn into the war.

The situation has deteriorated to such an extent that an emergency meeting of the UN Security Council was called where the UN Secretary-General António Guterres warned that the conflict risks spiralling "out of control" and called for an immediate de-escalation and a full and unconditional ceasefire.

However, the drone and missile attacks have continued and on June 1-2, Russia launched another massive overnight assault striking multiple locations in Kyiv and Dnipro with the UN Human Rights Monitoring Mission in Ukraine (HRMMU) reporting that this attack killed at least 22 civilians and injured 145.

So, this shift to long-range warfare has led to an increase in collateral damage and civilian deaths.

Moreover, on May 31, there was a drone strike on the Russian-held Zaporizhzhia nuclear plant, increasing the risk of a nuclear accident. Ukraine denied responsibility. However, former Russian President Dmitry Medvedev warned that Russia's response could extend beyond Ukraine.

Russia still has the advantage of resources and manpower: it continues to describe the conflict as a 'special military operation' and has not called up all the manpower at its disposal, which it can if it finally declares the conflict as a 'war'. Both Russia and Ukraine at this point seem to be following the same tactic: inflict maximum pain on the other side so as to be in a stronger position if and when formal diplomatic discussions start.

What is the current state of the peace talks?

The U.S.-led peace talks are currently stalled. The trilateral talks between the U.S., Russia and Ukraine in Geneva in February 2026 and subsequent discussions in UAE failed to achieve any diplomatic breakthroughs. Though Russia has said it is open to talks, its maximalist position makes any agreement with the Zelensky-led government impossible. Russia wants recognition of its sovereignty over the annexed regions of Crimea, Donetsk, Luhansk, etc., along with a strict limit on the size and capability of the Ukrainian armed forces and a legally binding commitment that NATO troops will never be deployed in Ukraine. Ukraine, egged on by its European partners, too has adopted a maximalist position, insisting on ironclad security guarantees before any cessation of hostilities and refusing to surrender any territory to Russia. Though Europe is reportedly considering opening a line of communication with Russia, it is unlikely that Russia will consider any of the EU members or the U.K. as a mediator given their open support for Ukraine over the years.

Is Putin under pressure?

This war of attrition is obviously also damaging the economies of both the countries. Ukraine is entirely dependent on aid from its Western partners while Russia was already running a huge budget deficit of around 5.9 trillion roubles by April this year brought on by the war and Western sanctions. This is already more than the budget deficit in 2025, according to a report in the Jacobin.

Ukraine now has around 70% of the Russian population within the range of its drones, forcing Russia to divert critical air defence systems from the front lines to protect its cities, including Moscow and Saint Petersburg, putting further pressure on its economy according to an Atlantic Council Report.

Some reports suggest that Russian President Vladimir Putin is under pressure because of the stalling war and a contracting economy. Inflation is increasing as Russia has increased VAT twice this year and interest rates are high.

In April this year, Russia’s Central Bank Governor, Elvira Nabiullina, warned that Russia is facing a labour shortage for the first time in its modern history. Gennady Zyuganov, the chief of the Russian Communist Party, which has been supportive of Mr. Putin and the war, has said in the Duma that economic collapse could provoke a revolution like in 1917 and has urged the government to change course.

Moreover, the Japan Times has reported that in a sign of internal friction, senior government officials have warned Mr. Putin that spending on the war in Ukraine is on an unaffordable path, though the Defence Ministry has refused cuts to its budget. It appears that public disaffection is increasing.

While some of these reports might be motivated, it stands to reason that public optimism about winning the war easily has come down given the prolonged conflict, Ukrainian attacks into deep Russian territory and rising Russian casualties. Prolonged public discontent along with more Ukrainian attacks causing collateral damage might provoke Mr. Putin into expanding the war beyond Ukraine as Russia has time and again asserted that Ukraine is being empowered and financed by its European partners to continue the war with Russia. Moscow has already said that the European facilities involved in joint production agreements of drones and missiles with Ukraine are “potential targets for the Russian armed forces”. It is no secret to the rest of the world that the Ukrainian conflict is a proxy war being waged by the Western powers against Russia.

There is also the chance of a miscalculation or an accident by either side which could expand the war.

If any of these scenarios take place and if NATO invokes Article 5 which states that "an armed attack against one NATO member shall be considered an attack against all members", the conflict will grow from a geographically contained one to a broader war involving NATO's frontline allies.

Ironically, the only hope against this happening is that the U.S. under President Donald Trump (who recently launched an unprovoked war on Iran along with other misadventures in Venezuela and Cuba), refuses to acquiesce with the invocation of Article 5 as this requires a unanimous decision. The more optimistic scenario is that both Ukraine and Russia admit that the conflict is at a stalemate and agree to talk. But who the facilitator for that would be is anybody's guess because it seems that Mr. Trump has lost interest in this particular conflict.

TRUMP CANNOT ACHIEVE WITH DIPLOMACY WHAT HE FAILED TO GET THROUGH WAR

When Donald Trump and Benjamin Netanyahu launched the war on Iran on February 28, their objectives were sweeping: regime change in Tehran, the dismantling of Iran's missile and nuclear programmes, and the curbing of its support for regional non-state allies. In the early days of the conflict, Mr. Trump ruled out any agreement with Iran and demanded its "unconditional surrender". The war went so badly for Washington that, three months later, Mr. Trump is negotiating a temporary ceasefire extension and the reopening of the Strait of Hormuz in exchange for economic concessions to Tehran. According to a draft MoU reported by U.S. media, Iran would restore maritime traffic through the Strait of Hormuz to pre-war levels, while the U.S. would gradually lift its blockade of Iranian ports. Tehran would also get access to its frozen funds, while the ceasefire would be extended on all fronts, including Lebanon. Yet, even if approved by both sides, the agreement is only a preliminary one. Mr. Trump no longer speaks of Iran's missile programme or its support for its regional allies. His focus has narrowed to the nuclear issue, essentially the line Barack Obama adopted in 2013, culminating in the 2015 nuclear agreement with Iran, which Mr. Trump sabotaged in 2018. Once the MoU is reached, Iran and the U.S. would start serious direct negotiations on the nuclear issue.

Mr. Trump's military campaign has failed to achieve any of its declared objectives. By striking U.S. bases across the Persian Gulf and taking control of the Strait of Hormuz, Iran widened the conflict regionally and economically. Mr. Trump announced the ceasefire on April 8, likely realising that air strikes would achieve little, and has tried to extract concessions from Iran through economic and military pressure. But Iran responded in kind. After Mr. Trump announced a blockade on Iranian ports, Tehran cancelled negotiations and pushed the nuclear file down its list of priorities. That Washington is now negotiating, through Pakistan, an MoU to extend the ceasefire and then take up the nuclear file suggests that Tehran's hardline tactics are yielding results. Tehran had previously engaged constructively with the U.S. When Mr. Trump unilaterally withdrew the U.S. from the 2015 nuclear deal, Iran was compliant with its obligations, and in early 2025 and February 2026, it was engaged in talks. So, if the U.S. seeks a deal, it must address the trust deficit and proceed on the basis of mutual concessions. If Mr. Trump is serious about a negotiated settlement, a deal is within reach. But if he seeks to achieve through diplomacy what he failed to secure through war, he risks entangling the U.S. in yet another forever war.

'YOU'RE F*****G CRAZY': TRUMP TELLS NETANYAHU TO STOP ATTACKING BEIRUT

US President Donald Trump sharply criticised Israeli Prime Minister Benjamin Netanyahu during a phone call over Israel's actions in Lebanon, according to Axios, citing US officials familiar with the exchange.

Key Takeaways:

• Trump expressed anger at Israel's plans to expand its operations, including a possible strike on Beirut. One official said he warned that such a move would further isolate Israel internationally.

• According to sources quoted by Axios, Trump told Netanyahu: "You're f****** crazy... what are you doing? You'd be in prison if it weren't for me. I'm saving your a**. Everybody hates you now. Everybody hates Israel because of this."

• Another official said Trump raised concerns about civilian casualties and objected to strikes that involved heavy damage to limited targets. He acknowledged Israel's right to respond to attacks from Hezbollah but said the recent escalation went too far.

• The call came at a time when tensions in the region were already high. Iran had signalled it could step back from ongoing talks with the United States due to Israel's actions in Lebanon.

• Trump appeared worried that the situation could affect those negotiations. After the call, he said discussions with Iran were still moving forward.

• Following the conversation, Israel decided not to carry out a planned strike on targets in Beirut, an Israeli official told Axios. However, Netanyahu said Israel would continue its military operations in southern Lebanon. In a statement, he said Israel would act if Hezbollah continued its attacks, adding: "Our position remains the same."

• Trump and Netanyahu have had tense exchanges in the past but have continued to work together on key issues, including Iran. One official described this call as among the "most difficult" between the two leaders in recent months. Despite the tension, both sides remain in contact as the situation in the region develops.

• The use of abusive, derogatory, or undiplomatic language by international leaders raises important ethical questions in the domains of leadership, diplomacy, public morality, and international relations. When a prominent leader such as Donald Trump uses abusive language in public or private interactions, the issue extends beyond personal conduct and affects international norms and governance.

COURT REJECTS RWANDA'S £100 MN CLAIM AGAINST U.K. OVER MIGRANT DEAL

An international court on Monday rejected a claim by Rwanda for Britain to pay more than £100 million it said London still owed from a scrapped deal to deport migrants.

Judges from the Permanent Court of Arbitration (PCA) in The Hague ruled that Britain was not liable for two years of outstanding costs from the scheme that was shelved in 2024.

In 2022, former U.K. Prime Minister Boris Johnson sealed a deal with Kigali to send to Rwanda migrants arriving in Britain via "dangerous or illegal journeys" in small boats or lorries.

But the scheme hit legal and political obstacles from the start, with the U.K. Supreme Court eventually ruling it illegal.

When Keir Starmer became British Prime Minister in July 2024, he declared the plan "dead and buried" on his first full day in office, dismissing it as a "gimmick".

'Waste of tax money'

Then Interior Minister Yvette Cooper called it "the most shocking waste of taxpayers' money I have ever seen".

During the two years before the scheme was scrapped, only four people actually went to Rwanda, all voluntarily, according to the current U.K. government.

According to the U.K. government website, about £290 million has already been paid to Rwanda, but Kigali argued in its pre-hearing submissions to the PCA that two annual payments of £50m were still outstanding.

But the PCA, set up in 1899 to settle contractual disputes between nations, rejected by majority a £50m claim for one year and unanimously rejected the same amount for the second.

EU MOVES POLICY FOR DEPORTATIONS AND DETENTION CENTRES IN THIRD COUNTRIES

The European Union has moved forward with a vast overhaul of its migration policy, aiming to ramp up deportations and ink controversial deals to build detention centres abroad, in what rights groups compare to President Donald Trump administration's aggressive immigration policies in the U.S.

"The new regulation will speed up the return process and increase returns of persons who have no legal right to stay in the EU," said Nicholas Ioannides, Deputy Migration Minister for Cyprus, which holds the rotating presidency of the 27-nation bloc.

The deal was struck between the EU's three main institutions — the European Commission, the European Council, and the European Parliament — during a so-called "trilogue" on Monday.

Critics compared the regulation to the immigration strategy of the Trump administration, which has struck a series of secretive agreements with nations around the world to deport thousands of people to countries that are not their own. The United Kingdom also planned to deport migrants to Rwanda, but the plan was bogged down in legal red tape and the new government dropped the plan as soon as it came to power.

"The Regulation is going to create a draconian detention and deportation machine," said Silvia Carter, spokesperson for the Brussels-based Platform for International Cooperation on Undocumented Migrants.

'Violence by ICE'

"Across the Atlantic, we see the violence and fear created by ICE's brutal immigration enforcement. Europe should be learning from the harms of that model, not building its own version of it."

The provisional agreement will now head to the EU lawmakers and heads of state, where approval will likely be swift.

EU member nations will soon be able to set up bilateral deals with countries outside the bloc to build deportation centres. At least five EU nations — Germany, Austria, the Netherlands, Denmark, and Greece — are already in talks with third countries, mostly in Africa, to host "return hubs" on the model of Italy's detention deal with Albania.

The EU has continually tightened migration policies after right-wing parties took power in some countries in 2024. European Commission President Ursula von der Leyen, from the centre-right European People's Party coalition, has said that the new measures will prevent a repeat of the 2015 crisis caused by Syria's civil war, when about one million people arrived to seek asylum.

Fuelled by people fleeing conflict and poverty across Africa and West Asia, the 2015 refugee crisis and successive years of irregular migration to Europe have driven a rightward shift in the bloc's politics not unlike the anti-immigrant sentiment that buoyed a "red wave" in the 2024 election in the U.S.

Centre-right political groups allied with the far-right to overcome opposition from centrist and left-wing parties, said Mélissa Camara, a French lawmaker and member of the Greens who called the deal "a historic setback" for human rights in the bloc.

"The legalization of return hubs outside the European Union, the green light for the detention of minors, home visits inspired by ICE practices: the legal arsenal serving a xenophobic ideology is now complete," she said.

Setback to human rights

Activist groups warned the legislation would cut deep into the protections granted by the EU fundamental charter on human rights and expose people to risks outside the bloc.

"This deal will give governments much broader powers to detain and deport people," said Marta Welander, a spokesperson for the International Rescue Committee. "It looks set to normalize immigration raids, expand the use of detention in prison-like facilities outside EU territory that are essentially legal black holes, and increase the risk of people being deported to countries where they could face persecution, torture or worse."

INCOMPLETE TRUCE

The new ceasefire agreement between Israel and Lebanon could help remove a major obstacle to U.S. President Donald Trump's efforts to secure a preliminary agreement with Iran to end the war. Last week, Iran suspended talks with the U.S. in protest against Israel's escalating war in Lebanon. In April, when Mr. Trump announced an Israel-Lebanon ceasefire, he had said that Israel was "prevented" from attacking the country any longer. But Tel Aviv continued air strikes and expanded ground operations in southern Lebanon. Iran has maintained that in its April 8 ceasefire with the U.S., Washington had promised that the ceasefire would come into force on all fronts, including Lebanon. Now, after Iran paused talks with the U.S., Mr. Trump swung into action. He claimed that he had talked Israeli Prime Minister Benjamin Netanyahu out of his plans to bomb Beirut and had a conversation with Hezbollah's representatives, who agreed "not to shoot". The Israel-Lebanon ceasefire statement followed Mr. Trump's announcement. Mr. Trump's firm diplomatic intervention, which reportedly included an expletive-laden call with Mr. Netanyahu, points to the importance he gives to the diplomatic process. Before the Lebanon crisis flared up, the U.S. and Iran were negotiating a memorandum of understanding to reopen the Strait of

Hormuz and remove the U.S. blockade of Iranian ports, which would set the stage for negotiations on Iran's nuclear programme.

While the ceasefire agreement is welcome, it remains fragile and incomplete, leaving the conflict's key problems unaddressed. The actual fighting in Lebanon is between Israel and Hezbollah. The Lebanese government is not a party to the conflict and Hezbollah does not report to the Lebanese army. But Hezbollah was not part of the negotiations. The ceasefire agreement requires Hezbollah to unilaterally cease attacks, but it does not ask Israel to make concessions. Hezbollah says it would stop fighting only if Israel withdraws from southern Lebanon. Israel, which has made its deepest incursions into southern Lebanon since its 2000 withdrawal, is not talking about any withdrawal plan. Israel has also broken all its ceasefire agreements in recent years. Despite a truce deal, it continues to bomb Gaza. Mr. Trump's announcement of a new ceasefire despite an existing one highlights the fragility of the truce. What he is trying to do is to bring in a stop-gap arrangement in Lebanon to push his planned deal with Iran. But for this to work, he should get firm commitments from Israel that it would not break the terms. For a lasting truce in Lebanon, Israel has to end its illegal occupation of the south and pull back its troops.

THE OVERLOOKED CONFLICT: CIVIL WAR AND HUMANITARIAN DISASTER IN SOUTH SUDAN

Among the United Nations Peacekeepers to be honoured with the Dag Hammarskjöld Medal this year, given to those who lost their lives on UN peacekeeping missions, is Indian national Naib Subedar Sujit Kumar Pradhan, killed in South Sudan last year.

Key Takeaways:

• India is the second-largest troops contributor to United Nations Mission in South Sudan (UNMISS), with 4,268 personnel as of March 31.

• South Sudan is the youngest country in the world, created only 15 years ago. UNMISS was created almost along with the country. The nation's short history is marked with such conflict that today, more than half its population faces acute food shortage. The latest round of fighting has been raging since March last year, in which hundreds are estimated dead while thousands have been displaced, though exact figures are hard to come by.

• The humanitarian organisation Médecins Sans Frontières (MSF), also called Doctors Without Borders, has been operating in South Sudan almost since the country's inception. Its Head of Mission, Yashovardhan, told The Indian Express, "I was in South Sudan in 2014, in Unity State, when the civil war first broke out in December 2013. Hundreds of thousands of people were displaced and put up in the UN peacekeeping mission compound. This time, I went to Jonglei. After 12 years and in two regions, the situation is the same.

Do You Know:

• South Sudan was created after a long struggle for independence from the Republic of Sudan, itself created in 1956 after British and Egyptian colonial rule ended. The southern region of this nation felt sidelined and unfairly treated, leading to the birth of South Sudan in 2011.

• Two leaders of the independence struggle, the Sudan People's Liberation Movement, were Salva Kiir, the current President of South Sudan, and Riek Machar, who served as his Vice President when the country gained independence. Kiir soon accused Machar of plotting to overthrow him, and the leadership tussle between them flared up into a civil war in 2013, fuelled by local-level tensions and grievances.

• Kiir belongs to the Dinka community, while Machar is from the Nuer group. Their supporters rallied behind them, and the two sides fought brutally.

• After five years of fighting, a peace agreement, 'Revitalised Agreement on the Resolution of the Conflict in the Republic of South Sudan', was signed in 2018. Machar came back as Vice President.

• Then in March 2025, the White Army, a militia that supports Machar, had a skirmish with the Army. Within weeks, Machar was placed under house arrest and over the next few months, charged with various crimes, including murder and treason. Fighting has been raging ever since.

• People have possessed arms, and the knowledge to use them, since the days of the independence struggle, when the rebels were looting government armouries and the government was arming those loyal to it. Also, the largely pastoral society has had a culture of cattle raids.

• A UN report from April says, "Hunger is pushing 56 per cent of South Sudan's population into high levels of acute food insecurity between April and July 2026… Through July this year, 700,000 children are projected to face severe acute malnutrition, the deadliest form."

NATIONAL

INDIA, AUSTRALIA AGREE TO ADVANCE MARITIME AWARENESS ACTIVITIES

DEFENCE MINISTER Rajnath Singh and his Australian counterpart Richard Marles have agreed to advance collaborative maritime domain awareness activities using maritime patrol aircraft and to explore opportunities to enhance undersea domain awareness. The two leaders on Monday co-chaired the second edition of the India-Australia Defence Ministers' Dialogue in New Delhi.

Key Takeaways:

• According to a joint statement issued by the two countries, the ministers welcomed the significant progress in bilateral relationship and reflected on the enhanced consultation and cooperation since the inaugural edition of the dialogue on October 9 last year.

• The joint statement noted that the two sides discussed efforts to finalise the Joint Maritime Security Collaboration Roadmap.

• The statement further said India and Australia, as co-leads of the Indian Ocean Rim Association Working Group on Maritime Safety and Security, look forward to jointly host a Search & Rescue and tabletop exercise at Maritime Rescue Coordination Centre, Chennai this month to strengthen maritime safety and security cooperation in the Indian Ocean Region.

• The Ministers welcomed increased information sharing between operational headquarters and said they are looking forward to the inaugural Joint Staff Talks later this year, the statement said. The two leaders encouraged their officials to finalise arrangements for the deployment of an Indian visiting instructor at the Australian Defence College in 2028-2029 to strengthen professional military engagement, knowledge exchange, and strategic alignment.

Do You Know:

• India-Australia relations gained significant momentum following PM Narendra Modi's visit to Australia in 2014. The relationship has since produced several key security agreements, including the Comprehensive Strategic Partnership and the Mutual Logistics Support Agreement (MLSA).

'INDIA HAS SIGNED A DEAL WITH VIETNAM FOR THE SUPPLY OF BRAHMOS'

In the first official confirmation of India selling the BrahMos missiles to Vietnam, Defence Secretary Rajesh Kumar Singh said Saturday that a deal has been signed with the southeast Asian nation for the supply of the missiles, adding that a similar deal with Indonesia is in "final stages".

Key Takeaways:

— Singh, who is in Singapore to attend the Shangri-La Dialogue, made the comments in response to a question on potential buyers of the missile system.

— "My understanding is that with both Indonesia and with Vietnam, the deal is in the final stages… In fact, for Vietnam, I understand that it has already been signed, probably not publicly announced, but it's already been signed," he said.

— Signing a contract worth nearly 375 million dollars, The Philippines had become the first foreign buyer of the BrahMos missile system from India in 2022. In March, Indonesia had also said that it had entered into an agreement with India to procure the BrahMos missile system.

— The details of the deals with Indonesia and Vietnam are yet to be made public. Singh said countries generally sell sophisticated weapon systems and platforms to nations they regard as friendly partners.

— He said India has a strong commitment to the ASEAN nations, adding: "...we treat all of you as 'friendly foreign countries' with whom we can share advanced defence technologies".

— He told delegates that India was ready to work with partners across the region and beyond to build resilient supply chains and trusted defence partnerships besides securing maritime commons.

— He said India had undertaken major reforms in defence production, innovation and exports over the past decade, adding that the sector had been opened to greater private-sector participation.

Do You Know:

— BrahMos supersonic cruise missiles, which have been operationalised in all three defence services, are built by BrahMos Aerospace, a joint venture between India's Defence Research and Development Organisation (DRDO) and Russia's NPO Mashinostroyeniya.

— BrahMos is a two-stage missile with a solid propellant booster engine. Its first stage brings the missile to supersonic speed (meaning faster than sound) and then gets separated. The liquid ramjet or the second stage then takes the missile closer to three times the speed of sound in cruise phase. The missile has an extremely low radar signature, making it stealthy, and it can follow a variety of paths.

— BrahMos missiles operate at close to Mach 3 speed in the cruise phase, which ensures reduced flight time, lower dispersion of targets, and quicker engagement time and non-interception.

— The missile operates on a 'Fire and Forget Principle', adopting varieties of flights on its way to the target. As per its website, cruising altitude could be up to 15 km and terminal altitude as low as 10 metres. The missile carries a conventional warhead weighing 200-300 kg.

— The range of some BrahMos missiles for land and ship attacks have been nearly doubled in recent years.

VENEZUELA, INDIA IN TALKS FOR LONG-TERM ENERGY PACTS

India and Venezuela Thursday discussed "forging an energy partnership" and entering into "long-term contracts" as Delcy Rodriguez, on her first trip to India after becoming Acting President of her country, held talks with Prime Minister Narendra Modi in New Delhi.

Key Takeaways:

• Rodriguez took charge of Venezuela after President Nicolas Maduro was abducted by US forces in a military operation in January this year.

• After meeting Rodriguez, Modi, in a post on X, said, "We had extensive discussions on expanding our cooperation in energy, critical minerals, technology, agriculture, health and people-to-people ties."

• "As a valued partner in Latin America, our close cooperation with Venezuela holds immense importance for the Global South. We will continue to work together for the mutual benefit of the people of our nations," he said.

• Asked whether the leaders discussed the issue of Maduro, Rudrendra Tandon, Secretary (East) in the Ministry of External Affairs, said, "Coming to the political transition, of course, this was a very frank conversation that the two leaders had, both during when all of us were there, as well as on the table when they were having their working lunch, but I don't think that I should, you know, get into those sort of things."

• "We all know that there was a transition in Venezuela. But we are working with a government that is friendly, that wants a partnership with India. We want to reciprocate that, and don't forget that Venezuela has been traditionally a very close friend. Bilaterally, we have done a lot of partnerships, and at the international level, we have collaborated very closely… We are just going back to normal," he said.

• Tandon said Venezuela views India as a "preferred partner" and "India has stood with Venezuela in bad times as well as in good times".

Do You Know:

• On January 30, Prime Minister Narendra Modi spoke with Venezuela's Acting President Delcy Rodriguez and the two leaders agreed to take the bilateral relations to new heights in the years ahead. The phone call from Rodriguez to Modi was the first since the capture of Venezuelan President Nicolas Maduro and his wife by the United States in the first week of January. Energy was one of the topics covered in the leaders' conversation.

• Venezuela has the largest oil reserves globally, estimated at over 300 billion barrels or a fifth of the proven oil reserves all over the world. The world's largest oil exporter, Saudi Arabia, is second to Venezuela in terms of proven oil reserves. But Venezuela produces around 1 million barrels per day (bpd) of crude, while global output is over 100 million bpd.

• The relatively insignificant oil production by Venezuela, despite massive potential, is a result of a combination of factors that include US sanctions on the country's oil and gas sector constraining its energy exports, apart from a severe economic crisis in Venezuela and a debilitating lack of investment in the country's oil and gas infrastructure.

TOP COURT APPOINTS HIGH-POWERED PANEL TO REVIEW ARAVALLI DEFINITION REPORT

The Supreme Court on Tuesday constituted a High-Powered Committee (HPC) under Kanchan Devi, Director General, Indian Council of Forestry Research and Education (ICFRE), to obtain a "fair, impartial and independent" opinion and "resolve critical ambiguities" in the report on the definition of the Aravalli hills submitted last October by a panel headed by the Environment Secretary.

Key Takeaways:

• The HPC has been asked to submit its comprehensive report by August 31. ICFRE is an autonomous council under the Ministry of Environment, Forest and Climate Change, and is registered as a society with the MoEF Minister as its President.

• Kanchan Devi, a 1991-batch Indian Forest Service officer, reports to the ICFRE Board of Governors headed by the Environment Secretary. The High Powered Committee will review the October 2025 report of the earlier Aravalli panel, which was chaired by the MoEF Secretary.

• Other than Kanchan Devi who will be the ex-officio chairperson, the HPC announced on Tuesday has four members — Dr Subhash Ashutosh, former Director General of the Forest Survey of India; Dr Rajendra Kumar Sharma, former Director of the Geological Survey of India; Brij Mohan Singh Rathore, former Joint Secretary in the Environment Ministry; and Prof Ashok K Bhatnagar, former head of the Department of Botany at Delhi University.

• The SC also named two special invitees — Prof Jagdish Krishnaswamy of the Indian Institute for Human Settlements, Bengaluru, and Prof Laxmikant Sharma of the Central University of Haryana — who will be "associated from time to time by the chairperson" of the HPC.

• In the past, high powered committees have often been chaired by independent experts like Dr Madhav Gadgil (Western Ghats), Dr Ravi Chopra (Char Dham Project) and Prof MGK Menon (hazardous waste).

• A series of investigations by The Indian Express during November-December 2025 reported that a SC-appointed committee headed by the Environment Secretary ignored the Forest Survey of India's (FSI) warning that a 100-metre height threshold would exclude nearly 90 per cent of Aravalli hills, overlooked objections raised by the Central Empowered Committee (CEC), and disregarded the SC's own rejection of the 100-metre benchmark in 2010.

Do You Know:

• The Aravalli Mountains, one of the world's oldest ranges, are a prominent geological feature shaping western and northwestern India. It serves as a natural barrier against desertification, preventing the expansion of the Thar Desert and protecting cities like Delhi, Jaipur, and Gurgaon. The range also supports water recharge systems and is the source of important rivers such as Chambal, Sabarmati, and Luni. Its forests, grasslands, and wetlands harbour endangered flora and fauna, contributing to biodiversity and regulating precipitation through evapotranspiration, which helps mitigate droughts. The highest peak of the Aravalli mountain range is Guru Shikhar, located in the Sirohi district of Rajasthan.

• Critics fear that this definition, under which the Aravallis comprise any landform at an elevation of 100 metres or more above the local relief, would be a hammer blow for an already degraded hill range that provides diverse ecological and environmental services to northern and northwestern India.

• In late 2025, the Supreme Court of India approved a new, uniform definition for the Aravalli Hills, classifying them as any landform rising 100 metres or more above the surrounding local terrain. However, this new definition sparked major controversy, and the Court has since stayed its ruling.

• The new definition of the Aravallis, was proposed by the Centre on October 13, 2025 effectively excludes almost 90% of the range from protections against mining and other development activities, as per an internal assessment of the Forest Survey of India.

ARAVALLI RANGE'S ROLE IN SHIELDING GANGETIC PLAINS FROM THAR DUST

Visuals of a massive dust storm in Churu on Saturday (May 30) have been going viral on social media. The storm, which affected Churu, Hanumangarh, Sri Ganganagar, Bikaner, Nagaur, Didwana-Kuchaman, Alwar and Sikar, is common in parts of Rajasthan this time of the year, when dust-bearing winds blow in from the Middle East and the Thar Desert.

Key Takeaways:

• What stands between the Thar's dust and the densely populated Indo-Gangetic plains is the Aravalli range. As the winds run into the Aravallis, they lose speed and drop their load of sand. Many such sand dunes, called 'obstacle dunes', can be found on the range's slopes, visual proof of the protective role it plays.

• As Chetan Agarwal, environmental researcher and Senior Fellow at the Centre for Ecology Development and Research (CEDAR), explained, "On many hills on the western slope, directly exposed to the hot winds from the west, there are large deposits of sand known as obstacle dunes. The vegetation growing in these dunes is similar to that found in desert regions. If there is additional tree cover, the wind has to pass through it, creating a natural scrubbing effect and reducing the movement of sand and dust. The dunes clearly show the role the Aravalli range plays in interception of dust."

• This shield, however, is under stress, as the range degrades due to loss of vegetation and mining on hillocks. Meteorologists say dust from Rajasthan reaches the northern plains now even when a dust storm is not very intense.

• Dust storms primarily originating from the Thar Desert are not unusual over northern India in the pre-monsoon months of April to June. These storms are fuelled by intense heat and dry conditions, while south-westerly and westerly winds move the dust across the region.

Do You Know:

• The India Meteorological Department's (IMD) Climate Hazards and Vulnerability Atlas of India, based on 1981-2010 climatological normals, shows that parts of northwest India fall in the highest dust-storm frequency class, averaging 0.89 to 1.55 dust-storm days.

• The long-period data shows that Delhi and its neighbouring districts already lie in a high-exposure zone. In June, the storm activity is markedly high, with the national capital district recording a frequency of 2.5 days, the highest in the country for the month. With the Aravalli's degradation, the effects of such storms can be felt more.

• A Forest Survey of India (FSI) assessment of 2018 found that 31 of the 128 Aravalli hills in Rajasthan had disappeared due to anthropogenic pressures. There has also been a loss of hills with 200 meters to 600 meters elevation above sea level in Naraina, Kalwar, Kotputli, Jhalana, and Sariska in Rajasthan.

• The Environment Ministry in its Aravalli restoration framework last year flagged the causes behind the degradation to be a mix of mining of red silica, granite and other minor minerals, deforestation, urbanisation, construction activities, land-use change, pastoral activities and encroachments.

WHY SUPREME COURT IS CRACKING THE WHIP AGAINST STATES OVER CHAMBAL

The Supreme Court's latest indictment of Rajasthan, Madhya Pradesh and Uttar Pradesh over illegal sand mining in and around the inter-state National Chambal Gharial Sanctuary reflects years of judicial frustration with persistent administrative apathy, leading to an environmental and governance crisis.

Key Takeaways:

— The apex court, which took suo motu cognizance of the matter in March, was particularly harsh on Rajasthan in its May 26 order, slamming its "wholly casual, indifferent and indolent" conduct, and rebuking the state administration for demonstrating "persistent inaction" and a "disturbing lack of seriousness".

— Sand mining was prohibited in the Chambal sanctuary in 2006 but illegal extraction has continued and flourished over the years under organised syndicates. The indiscriminate sand extraction has severely disrupted the Chambal's riverine ecosystem, damaging aquatic habitats and threatening environmental flows, putting at risk the survival of endangered gharials, freshwater dolphins and turtles.

— In 2012, an IPS officer was crushed to death by a tractor carrying illegally mined sand in Morena, Madhya Pradesh. The Court's May 26 order referred to the killing of two forest guards this year alone – one again in Morena last month, and another in Dholpur, Rajasthan, this January – to emphasize what it called a "serious erosion of the rule of law" in the region.

— At a hearing on May 14, the Supreme Court expressed concern that authorities appeared to prosecute only vehicle drivers, while failing to investigate the financiers, contractors, operators and masterminds controlling illegal mining syndicates.

— The Court stressed that environmental governance could not remain dependent on repeated judicial intervention and authorities must ensure "sustained and proactive enforcement" to curb illegal mining in the Chambal sanctuary landscape.

— On forest personnel allegedly lacking adequate weapons to counter heavily armed mining mafias, the Court said: "The State cannot be permitted to plead helplessness."

— Because of dark, foreboding myths around the Chambal – from a story linking its origins to a mountain of dripping leather, to the belief that Draupadi cursed its waters – the river, by all means mightier than the Yamuna, has remained one of India's most pristine. No great cities or shrines came up on its banks, with the isolation later fostering the badland reputation of the Chambal ravines as a place where all manner of black sheep — rebel tribesmen and later bandits – found refuge.

— The Chambal's splendid isolation started to wane after people living in the arid districts of Rajasthan and Madhya Pradesh started moving into the region. By 1960, the first dam on the Chambal – Gandhi Sagar – was built on the Rajasthan-Madhya Pradesh border.

— In the next five decades, six major irrigation projects – Rana Pratap Sagar, Jawahar Sagar and Kota barrage, Parbati Pick-up Weir, Harish Chander Sagar and Gudha dam – 12 medium, 134 minor and several panchayat-level projects came up in the Chambal basin. There are many more in the pipeline while work continues on several dozen.

— Sand mining is an additional challenge. Since there is still no technology to use desert sand for construction, the pressure is entirely on riverbanks, reservoirs, and coasts.

— Despite the threats to it, the Chambal still has the highest conservation value among rivers in the greater Gangetic basin. Its aquatic ecosystem and forest landscape support more than 550 species, it hosts the largest contiguous and most viable breeding populations of the critically endangered gharial and the red-crowned roofed turtle, and has one of the most important habitats of the Gangetic dolphin, Indian skimmer, black-bellied tern, sarus crane and a host of endangered turtle species.

— Besides, the Chambal is a vital corridor for dispersal of wildlife in an otherwise fragmented forest landscape across more than a dozen national parks and sanctuaries, such as Ranthambore, Keladevi, Kuno-Palpur, Madhav and Darrah-Mukundra.

Do You Know:

— The Chambal River is a tributary of the Yamuna River in central India and thus forms part of the Gangetic river system. The river flows north-northeast through Madhya Pradesh, running for a time through Rajasthan, then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in the Uttar Pradesh state.

— The Chambal river originates at Janapav, south of Mhowtown, near Manpur, Indore, on the south slope of the Vindhya Range in Madhya Pradesh. Its basin drains the Malwa Plateau, while its important tributary, the Banas River, originates in the Aravalli Range of Rajasthan.

CAN INSOLVENCY PROCESS PAUSE CHEQUE BOUNCE CASES? SC TO RULE

When a person undergoes IBC proceedings, a moratorium on legal action with respect to any debt kicks in. But there is little clarity on whether this moratorium covers cheque bounce. The matter has now been referred to a larger Supreme Court bench.

Key Takeaways:

• The Supreme Court has now set the stage for a clear ruling on this matter. It has referred to a larger bench the question of how the Insolvency and Bankruptcy Code (IBC), which provides a framework to deal with defaulting companies, intersects with Section 138 of the Negotiable Instruments Act, which criminalises cheque bouncing.

• On May 27, a bench of Justices JB Pardiwala and KV Viswanathan said a distinction may have to be drawn between the criminal and compensatory aspects of the cheque bounce litigation.

• The IBC, they observed, cannot become a route to avoid personal criminal accountability. They also said that allowing the recovery of compensation in a cheque bounce case during insolvency proceedings could undermine the IBC's objective of ensuring orderly distribution of assets among creditors.

• The reference stems from a disagreement in the court's own jurisprudence — whether a cheque bounce case is a fundamentally criminal prosecution or what an earlier Supreme Court judgment famously described as a "civil sheep in criminal wolf's clothing".

Do You Know:

• When a person is undergoing personal insolvency proceedings under the IBC, a moratorium on legal action or proceedings in respect of any debt kicks in under Sections 96 and 101.

• Section 96 provides for an interim moratorium from the date when the application for insolvency is filed, and Section 101 stipulates that a statutory moratorium should kick in once the court officially accepts the insolvency application.

• The current case, Dineshchand Surana v. UCO Bank case, pertained to whether a cheque bounce case qualifies as a proceeding that can be paused by the insolvency process.

If so, this would change the calculus for creditors, accused persons and directors of companies who are simultaneously facing insolvency and Negotiable Instruments Act proceedings.

• Section 138 makes dishonouring a cheque a criminal offence punishable by imprisonment, a fine or both. The criminal deterrent is meant to enhance people's faith in cheques as a mode of payment.

• Over time, courts placed emphasis on the compensatory aspect of Section 138 proceedings. A convicted accused can be directed to pay compensation to the complainant.

The offence is compoundable, which means that the parties can settle, and the case ends. A complainant can simultaneously file a civil suit for the same amount. These features have led courts to treat Section 138 proceedings as serving a dual purpose: punishment and restitution.

• The IBC moratorium is designed to prevent actions that deplete a debtor's assets while a restructuring is underway. If a compensatory part of a Section 138 proceeding does exactly that, taking money out of the debtor's estate in favour of the creditor, it may fall within the moratorium's reach. But if the offence is primarily criminal, the moratorium has no business touching it.

• The conflict in precedent goes back to a 2021 three-judge bench ruling in P Mohanraj v. Shah Bros Ispat, which dealt with the corporate insolvency moratorium under Section 14 of the IBC and analysed personal insolvency provisions.

TOWARDS A DIALOGUE ON ADOLESCENT SEXUALITY

A recent judgment of the Supreme Court of India, allowing the medical termination of pregnancy at 28 weeks, has received significant media attention. Much of this attention stems from the arguments advanced on behalf of the All India Institute of Medical Sciences (AIIMS), which has sought for a reconsideration of the judgment.

Doctors at AIIMS argued that what the court described as a medical termination of pregnancy would, in reality, involve delivering a living child at 28 weeks, one likely to be born with serious medical complications, long-term co-morbidities and disabilities. They asked that the delivery be pushed by six weeks to improve the child's chances of survival. These arguments were rejected by the court in rather strong terms.

A doctor's ethical burden

The nature of the doctors' argument is not inherently distinct from claims about a (much younger) foetus' interest in being carried to term. In both cases, more time in the womb increases the chances of survival outside it. However, since a 28-week foetus is at a more advanced stage of gestation, two things change about the claim.

First, doctors are better able to predict both the foetus' chances of survival and the medical complications it may face, making concerns about neo-natal care and future health more concrete. Second, and not unrelatedly, the ethical burden of the doctor who must perform the delivery increases significantly. Where a foetus is not viable, the doctor's sole obligation is to the pregnant woman. But where a living child may be delivered, the doctor's obligations extend to that child as well. A doctor may, therefore, experience the procedure not merely as an abortion, but as a medically induced premature delivery that immediately creates an obligation to preserve life. While the court's order protects her from legal action, it does not extinguish her ethical and moral obligations as a doctor and as a human being.

None of this necessarily undermines the court's decision. Faced with an unwed minor who had reportedly attempted suicide twice, the court understandably prioritised her reproductive autonomy and well-being. But the doctors' objections, though framed as concern for the unborn child, also reflect a potent anxiety: the ethical burden placed on medical professionals asked to perform such procedures at the edge of foetal viability. This burden need not change how we think about the outcome of the case, but it deserves to be acknowledged for the ethical tensions underlining it.

On adolescent sexual activity

These ethical tensions are not accidental or anomalous. The immense trauma endured by the unwed minor, the predicament of the unborn but viable foetus, and the ethical burden of the doctors are all symptomatic of a deeper structural issue. Cases like these arise because of a serious and largely unnoticed failure of the state to deal appropriately with the phenomenon of teenage sex. In this case, a de-facto consensual sexual relationship between a 15-year-old girl and her 17-year-old partner resulted in pregnancy. The pregnancy went unnoticed until the minor's mother reportedly observed 'an unusual heaviness' in her abdomen, by which time it was already too advanced to terminate without court intervention. This is because the Medical Termination of Pregnancy Act, as amended in 2021, does not allow abortions beyond 24 weeks even in exceptional circumstances.

The Indian state's approach to the issue has largely been one of blanket criminalisation: all sexual activity involving minors is treated as a criminal offence, regardless of whether it involves coercion, exploitation, or de-facto consensual sexual activity between adolescents. Studies from the U.S. have shown that abstinence-only policies fail to prevent adolescents from having sex. Empirical studies on the Protection of Children from Sexual Offences Act, 2012 (POCSO) in India have also repeatedly shown that nearly 10-15% of all cases before the POCSO special courts involve de-facto consensual relationships, and there is nothing to suggest that the law manages to deter such sex amongst adolescents.

If anything, this criminalisation works in tandem with the absence of adequate and comprehensive sex education in educational institutions.

Policies such as the ban on condom advertisements between 6.00 a.m. and 10.00 p.m., and a generally repressive culture around sex brush questions of sex and sexuality under the carpet. Instead of teaching adolescents the essentials of safe sex, menstruation, sexually transmitted diseases and pregnancy, the answer to all questions around sex and sexuality is reduced to a simplistic "don't do it". However, preventing cases such as this is more likely to require comprehensive sex education and an emphasis on safe sexual practices.

The way forward

Such policies require a more nuanced conversation around adolescent sexuality, in which we are willing to acknowledge that de-facto consensual sexual interactions involving adolescents exist and should not be conflated with instances of child rape and exploitation. They also require a commitment to steady long-term measures, which may not provide short-term rhetorical gains.

Thus, if our concern is truly the well-being of adolescents, the solution is not a refusal to acknowledge their sexuality but a commitment to engage with it honestly and meaningfully.

SC ASKS GOVT TO MAKE LAW EXEMPTING TRAFFICKED SEX WORKERS FROM PROSECUTION

Underlining that there can't be a one-size-fits-all approach in the application of the Immoral Trafficking Prevention Act (ITPA) to tackle commercial sexual exploitation (CSE), the Supreme Court has laid out an elaborate 'Victim Protection Plan', securing the rights of "voluntary" sex workers, and called upon the government to consider amending the law to exempt trafficked victims from being prosecuted for prostitution.

Key Takeaways:

• It also sought that the new law protects the victims from "sexual abuse" by police personnel when in custody.

• A bench of Justices JB Pardiwala and R Mahadevan, which exercised powers under Article 142 of the Constitution, said in its May 29 judgment that the plan which details "the manner in which preventive, protective and rehabilitative measures are to be taken to safeguard the fundamental rights of the victims of trafficking for CSE…would hold the field until the Parliament enacts a law on the subject". The court noted that "rights of sex workers can exist without there being a right to sex work".

• The 297-page judgment sought to distinguish those trafficked for prostitution from adults who indulge in it "voluntarily" and said that "by conflating prostitution and trafficking", the Act as it stands processes "those trafficked against their will…those who were trafficked but continue voluntarily…" and "those who have chosen sex work for themselves…through the same mechanism under Section 17, without differentiation."

• It said that "ITPA's failure to accord rights and protections to" the latter "combined with the deep social stigma attached to sex work, results in voluntary adult sex workers being isolated, marginalised, and unable to access protections that the law extends to them".

• Writing for the bench, Justice Pardiwala said, "The larger society's view of sex work is deeply rooted in moral judgment… This attitude is perhaps most starkly reflected in the deeply derogatory terminology that continues to be used in common parlance in Hindi and English to describe voluntary adult sex workers. The consequences of this stigma are severe and far-reaching."

• The new plan, with an emphasis on dignity and human rights, says, "Victims shall not, at any stage, be treated as criminals or subjected to measures associated with criminal liability."

• A one-size-fits-all approach, applied to the heterogeneous group of 'victims of trafficking for CSE', is unlikely to serve their interests properly. In fact, it might lead to unintended consequences.

Do You Know:

• In 2010, an appeal was filed in the SC against a July 25, 2007 order of the Calcutta High Court by which the latter upheld the life imprisonment imposed on a man named Budhadev Karmaskar, found guilty of murdering a sex worker in Kolkata's red light area in September 1999. On February 14, 2011, the SC dismissed Karmaskar's appeal against his conviction and sentencing.

The court suo motu converted the case into a PIL to address the problems of sex workers. It said: "We strongly feel that the Central and the State Governments through Social Welfare Boards should prepare schemes for rehabilitation all over the country for physically and sexually abused women commonly known as prostitutes as we are of the view that the prostitutes also have a right to live with dignity under Article 21 of the Constitution…" It issued notices seeking responses from the central and state governments.

• On July 19, 2011, the SC appointed a panel comprising Senior Advocates Pradip Ghosh and Jayant Bhushan, and the NGOs Usha Multipurpose Co-operative Society, Durbar Mahila Samanwaya Committee and Roshni Academy "to assist and advise" it "for giving suitable directions in this matter".

• In its final report submitted on September 14, 2016, the panel noted that sex workers found it difficult to acquire proofs of identity such as ration cards or voter cards because they lacked a proof of residence. It said that district authorities did not recognise the identities of sex workers and their children, and sex workers did not have access to schemes meant for their rehabilitation. They also had no access to credit offered by states, because the lack of documents prevented them from opening bank accounts, the panel said. The committee recommended that amendments should be made to The Immoral Traffic (Prevention) Act, 1956.

PRISONS IN INDIA CONTINUE TO BE OVERCROWDED BY UNDERTRIALS

While the latest Prison Statistics report released by the National Crime Records Bureau show that the occupancy rate in Indian jails fell to a decade-low of 112.7% in 2024, data shows that overcrowding remains a persisting problem in Indian prisons driven largely by a high share of undertrials. The report also highlighted other concerns such as insufficient capacity expansion and high levels of staff vacancies.

In more than half of the States/Union Territories (UTs) in India, prisons continue to operate beyond their sanctioned capacity. At the end of 2024, the country had about 1,333 jails with a capacity of 4.53 lakh inmates. However, with an inmate population of over 5.11 lakh, prisons continued to be overcrowded.

A Parliamentary Committee report, titled 'Prison– Conditions, Infrastructure and Reforms', noted that overcrowding strains resources, compromises living standards, increases tensions among inmates and limits their access to healthcare and rehabilitation facilities. It also recommended various measures such as the constructions of new buildings, barracks and prisons, transfers to other jails and free legal aid.

While the total number of jails remained lower than the pre-pandemic period, prison capacity has increased by 24% between 2015 and 2024 largely due to renovations and expansions which were carried out across 2,268 prisons in this period (Chart 1). Over 120 prisons were newly constructed in these years.

Though overall capacity has improved modestly, several States are yet to catch up. A Statewise analysis shows that more than half of the States had an occupancy rate of over 100% in 2024. Delhi recorded the highest occupancy rate in the country at 194% in 2024, much like the previous year when its occupancy rate stood at 200% (Chart 2). Other major States/UTs which saw high occupancy rates include Jammu and Kashmir, where occupancy rates increased from a mere 78% in 2015 to over 148% in 2023 and 2024.

However, the levels have relatively reduced in States such as Uttar Pradesh and Chhattisgarh which had previously registered higher occupancy rates. For instance, Chhattisgarh registered an occupancy rate of 234% in 2015. As per the latest report, this figure has decreased to 127.6%.

This problem of overcrowded prisons can be attributed to the disproportionately higher share of undertrials — who accounted for about 73% of the total inmate population in 2024 (Chart 3). While this is much lower than in 2021, when the undertrial population in prison peaked at about 77%, this is still higher than pre-COVID periods. On the other hand, the share of convicts in prisons reduced from about 32% in 2016 to 26.6% in 2024.

A Statewise analysis shows that in about 14 States/UTs, the share of undertrials is higher than the all India average (Chart 4). With over 87% of its inmates being undertrials, Delhi and Bihar were the two major States/UTs to have the highest share of undertrial population in its prisons.

Further, the Parliamentary Standing Committee on Home Affairs also expressed concern that the high levels of staff vacancies has become the most neglected part of prison administration. States/UTs such as Delhi and Jammu which registered higher occupancy rates and a higher share of undertrials also had a higher share of staff vacancies. Almost half of the sanctioned posts remained vacant in about 8 States/UTs. At least 60% of its sanctioned prison staff remained vacant in Delhi and Jammu and Kashmir.

THE APEX COURT RINGS ITS OWN CHAIN

In 1605, on his accession, the Mughal Emperor Jahangir fastened a chain outside his palace. Any subject denied justice by his administration could pull the chain and reach the emperor directly. The chain was, in conception, a remedy against the bureaucracy. The Indian Supreme Court is now, in its suo motu cognisance of individual criminal cases, the bureaucracy itself, ringing its own version of the chain. Each televised listing is the sound of the apex court calling attention to itself.

Media and motive

The latest instance is the court's suo motu cognisance of Twisha Sharma's death, registered under the title 'In Re Alleged Institutional Bias and Procedural Discrepancies in the Unnatural Death of a Young Girl at Her Matrimonial Home'. The title prejudges its own inquiry. Institutional bias has not been judicially established at any level. The apex court's own office report, signed by the

Assistant Registrar on May 23, records the basis of registration. The case was registered, the document says, 'based on media reports and other attending circumstances'. Two days later, the same bench appealed to the media to refrain from recording statements of witnesses. A court that acts on press reports while admonishing the journalists who filed them is, at the same moment, both consumer and critic of the same source.

The ground on which the apex court arrived was not vacant. A magistrate in Bhopal had remanded the husband, a practising advocate, to seven days of police custody. The Madhya Pradesh High Court had directed a second autopsy by an AIIMS Delhi team. The Bar Council of India had suspended the husband's licence. The State government had proposed transferring the investigation to the Central Bureau of Investigation (CBI) before the apex listing. The institutions whose bias the apex title alleges had been moving against the accused for nearly a fortnight.

Marc Galanter and Vasujith Ram put the central question to this reflex with care. Their study appears in A Qualified Hope (Cambridge University Press, 2019). Why does the response of the higher judiciary to executive or police failure take 'the form of these singular heroic interventions rather than promoting some institutional shake-up, some initiative to empower and equip courts lower in the judicial hierarchy'? Their diagnosis was unsparing. The reflex carries, they wrote, 'an echo of the disdain with which higher courts in India frequently treat the efforts of the lower judiciary'.

Easier path

Suo motu cognisance, in matters of this kind, is the easier of the two paths open to the apex court. The harder path is the slow, unspectacular work of reforming the judiciary it heads. The first requires only the bench's decision to list the matter. The second requires sustained cooperation: with the High Courts on case management and supervision under Article 235 (control over subordinate courts), with State governments on funding trial-court infrastructure, with the executive on judicial appointments, and with the National Judicial Academy on training. The asymmetry between the energies devoted to the two paths is what produces the diagnosis Galanter and Ram named.

Where the easier path is taken, the court chooses persuasion over compulsion. The apex bench has, in Sahara India Real Estate Corporation v. SEBI (2012), a five-judge Constitution Bench authority on media trial. Sahara permits a court to issue a postponement order against media publication. The test is a real and substantial risk of prejudice to the administration of justice. The order is available only where no less restrictive means will work. The doctrine is settled. In the Twisha matter, the bench had every occasion to invoke it. It chose instead to request the media not to record statements of potential witnesses. A request from the apex court carries moral weight. But it is not the legal instrument it has at hand for this very problem.

The post-2019 record is unkind to the pro-suo-motu case. In the R.G. Kar matter, the Supreme Court registered cognisance on August 18, 2024. Sanjay Roy had been arrested by the Kolkata Police eight days earlier. The Calcutta High Court had handed the probe to the CBI on August 13, 2024. The Sealdah trial court convicted Roy in January 2025 and sentenced him to life imprisonment. The trial judge did the work. Apex monitoring of CBI status reports did not.

Hathras is closer to the Bhopal facts and more instructive. The Lucknow bench of the Allahabad High Court registered the case suo motu in October 2020. The Supreme Court, after entertaining transfer petitions, handed monitoring back to the High Court within weeks. That earlier bench saw the architectural point: the High Court was already in motion, and the apex role was supervisory. In July 2024, following the Hathras Satsang stampede that claimed 121 lives, the court declined a PIL. The bench said that the High Court was equipped to deal with the case. The same principle applies in Bhopal too.

Scarce attention

Lakhimpur Kheri sharpens the matter. The apex court took cognisance in October 2021 and, in April 2022, set aside the High Court's bail order for the main accused, Ashish Mishra. It then eased him back into liberty. Interim bail came in 2023. Regular bail followed in 2024. As of early 2026, the trial court had examined only 44 of 131 witnesses. In Manipur, the suo motu case over the viral video from July 2023 has yet to produce a conviction. Apex supervision has not been the route to faster justice.

A second observation runs alongside. In 2019, Galanter and Ram called suo motu 'rare but highly visible'. The first half of that description has lapsed. What was once a residual jurisdiction is now a recurring instrument. A trigger sequence has begun to repeat. Sustained primetime attention is followed by cognisance. The Solicitor General has now confirmed the sequence in open court. Appearing for the Union in the Twisha matter, he told the bench that 'it is also because of this media intervention that a lot of progress has happened'.

The numbers since the chapter, authored by Galanter and Ram, went to press confirm the rule. The Supreme Court Observer, working from the apex court's own Case Status records, counts 35 suo motu matters in the five years from 2020 to 2024.

The preceding fifteen years had seen only 31 in total. The annual figures, excluding contempt, were 10 in 2020, eight in 2021, one in 2022, four in 2023, and 12 in 2024. The trend continues. In 2025, the court's numbering reached 10 civil suo motu writs and three criminal matters. Nine of the 10 civil matters are publicly listed. By May 25 this year, the count already stood at four civil and four criminal matters. Both totals exclude suo motu transfer and contempt, which exercise distinct constitutional powers. The criminal count, in particular, has risen sharply. Four months and three weeks have already exceeded the criminal count for all of 2025.

Judicial attention is a scarce resource. The National Crime Records Bureau recorded 6,450 dowry deaths in 2022, with convictions in only 11 to 17 per cent of cases. The court has the capacity to list one. The criterion of selection is, on the present record, temporal rather than legal. Galanter and Ram closed their chapter with a question. They asked whether suo motu was 'an instance of effective use of the scarce resource of judicial attention'. The seven years since they wrote have not produced an easier answer.

None of this is to deny the seriousness of the Twisha Sharma matter. The accused's mother is a retired judge. The husband is a lawyer. The family of the deceased has reason to fear local proximity. The constitutional response to that fear is independent investigation under judicial supervision, conducted promptly. The court, however, disposed of the matter on the first day after taking note of the "narrative" in the media that a fair investigation was being denied on account of the involvement of the judiciary.

The chain Jahangir hung was a remedy against an unaccountable bureaucracy. The apex court is now that bureaucracy. Each televised listing is the sound it makes to draw attention to a failure it has the power, and the constitutional duty, to repair. Until the harder of its two paths is walked with the energy now devoted to the easier one, the chain will keep ringing. The trial courts below it will keep doing the work.

DRAFT SC RULES PROHIBIT USE OF AI FOR JUDICIAL OUTCOMES, WITNESS PROFILING

Prohibiting the use of artificial intelligence (AI) to determine judicial outcomes, the Supreme Court AI committee has proposed draft regulations that bar AI-assisted sentencing without mandatory human oversight, prevent AI systems from profiling parties or witnesses, and disallow the use of "opaque" or "unexplainable" AI systems in any court process.

The proposed regulations come amid concerns expressed by the top court in recent months over the growing reliance on AI by courts in rendering judgments. In March, a Bench headed by Justice P.S. Narasimha chided a trial court for relying on non-existent judgments generated with the help of AI, observing that it was not merely "an error in decision-making" but amounted to judicial "misconduct".

The preliminary draft of the 'Regulations for Use of Artificial Intelligence (AI) in Courts, 2026', made public on Wednesday, underlines that AI systems used in court processes must "function solely in an assistive capacity" and remain "strictly subservient to human judgment and judicial authority".

The committee, chaired by Supreme Court judge Justice P.S. Narasimha and comprising Justices Sanjeev Sachdeva, Raja Vijayaraghavan V., Anoop Chitkara and Suraj Govindaraj, has invited comments and suggestions from stakeholders as well as members of the public on the draft regulations before they are finalised.

The deadline for submitting responses is June 20. Under the draft regulations, the processing of personal data through AI systems shall be governed by the provisions of the Digital Personal Data Protection Act, 2023. It also underlines that AI systems must not "perpetuate, amplify, or introduce bias" on grounds of race, religion, caste, sex, gender, disability, language, economic status, or any other ground prohibited under the Constitution.

'Human-in-the-loop'

"Applications involving higher levels of risk to personal liberty, any lawful right of a person, or the integrity of judicial outcomes shall be subject to correspondingly heightened safeguards, including mandatory human-in-the-loop requirements and independent oversight," the draft states.

It further cautions that AI-assisted judicial systems should not "widen digital divides" and must remain accessible to all stakeholders, including those from rural, economically disadvantaged, or linguistically diverse communities.

While the draft regulations permit the use of AI for administrative functions such as case management, preparation of cause lists, scheduling of hearings, transcription of court proceedings and translation of judgments, they make it clear that AI systems cannot be used for "risk scoring" in court processes. This includes assessing flight risk, predicting recidivism, evaluating bail eligibility, or determining the credibility of parties or witnesses.

It also bars authorities from using AI systems for the surveillance or continuous monitoring of judicial officers, advocates, litigants and other stakeholders, "except as may be specifically authorised by applicable law for the time being in force".

'Apex body'

To supervise the adoption of AI in the judiciary and steer standard-setting and policy development, the draft regulations propose the creation of a full-time “apex body” at the Supreme Court.

The apex body, it recommends, would comprise two Supreme Court judges nominated by the Chief Justice of India (CJI), one of whom shall serve as the ex-officio chairperson; two High Court Chief Justices and two High Court judges nominated by the CJI; one member from an institution of national importance or any institution of repute, as nominated by the CJI; an officer not below the rank of Joint Secretary in the Ministry of Electronics and Information Technology; a finance expert and a cybersecurity expert nominated by the CJI; among others.

PRESERVING THE RECORD

On the one hand, constitutional law holds up a principle of open justice that, among other things, allows public scrutiny of courts, facilitates public understanding of the law, and creates a historical record of the administration of justice. On the other, in Justice K.S. Puttaswamy (2017), the Supreme Court of India recognised the right to informational privacy, including the ability of individuals to exercise some control over personal information about themselves. The Delhi High Court order on May 29 concerning the ‘right to be forgotten’ illustrates how these two principles can sometimes point in opposite directions. While the digitisation of court records transformed the ability of anyone with an Internet connection, but also search engines and automated archivers, to access judgments and legal records, it also altered the consequences of publicity. In Europe, where the resulting persistence of digital information first gave rise to the ‘right to be forgotten’, the right is usually weighed against the freedom of expression and public interest. In India as well, the right should accommodate the principle of open justice without necessarily breaching the bounds of the right to privacy. Yet, the High Court decided otherwise. Justice Sachin Datta concluded that simply updating records would not suffice as search engines could excerpt small portions without sufficient context, that open justice does not demand the ability to discover particular details of the case using the accused person’s name, and that updating the official version would not necessarily update records that have since been copied to other websites.

The real problem is incompleteness, not discoverability. If a court acquitted or discharged a person from a dispute, anyone looking for the proceedings should also find that decision, rather than limiting a searcher’s ability to find the original decision. This is crucial if open justice is understood to require the records to be practically accessible rather than merely exist somewhere. Court records are official acts of the state and their obfuscation in any manner vis-à-vis the public record will have serious ramifications for the public record, to echo the court in the closely related Indian Kanoon matter (2024). While the High Court’s concern about the petitioner’s right to privacy is commendable, it should also consider digital accuracy as the way out. That is, judicial records must be wholly public as well as updated to prominently reflect major actions and decisions, rather than preserve the accusation alone, and the judiciary must impose conditions on any platform, including court registries, indexing legal information to refresh their databases on a regular basis and endeavour to display the results of any user queries with the proper context. Doing so would protect both fundamental rights and address the problem’s root cause.

DO NOT INDEX LEGAL RECORDS ONLINE USING NAMES, RULES DELHI HIGH COURT

The Delhi High Court held last week that individuals who have been acquitted or discharged or whose cases have been quashed are entitled to have their names de-indexed from name-based internet search results. In doing so, the court stated that the right to informational privacy under Article 21 (right to protection of life and liberty) extends to the digital domain.

Key Takeaways:

• The bench comprising Justice Sachin Datta laid down a framework governing when search engines and legal databases can be directed to de-index judicial records, while also identifying cases where relief would be available.

• It held, "In a society where digital records are virtually indelible, the ability to seek erasure ensures that informational self-determination remains effective. It protects individuals from perpetual exposure to past events that may no longer bear relevance, while preserving their dignity and autonomy."

• The petitioners, ranging from persons acquitted in criminal cases to parties in matrimonial disputes, argued that the internet search engine gives information a form of permanence. Allowing old allegations to remain accessible can continue to affect employment, reputation and personal dignity, they said.

• Google, Indian Kanoon (which hosts legal judgments), X Corp, and other intermediaries countered that they merely facilitate access to information already available in the public domain. Google described itself as functioning "analogous to a library index".

Media organisations argued that the removal of selective information would undermine transparency and "distort public memory".

• The respondents' central argument was that judicial records are public documents, and that making them easily searchable is part of the principle of open justice. Once information comprises public records, they contended, the right to privacy no longer subsists. The court rejected that argument. It drew on the SC's Sahara India Real Estate Corp v SEBI (2012), which held that open justice is "the cornerstone of our judicial system" and that "the right to open justice is not absolute."

• Distinguishing judicial records and name-based digital searchability, the court held that "'Open justice' requires that judicial records exist, they be maintained; and they be accessible to those with a legitimate purpose." What it cannot be extended to "is that a private individual's name functions as a permanent and unlimited retrieval key, through a commercial search engine."

Section 79 of the Information Technology Act states that intermediaries are shielded from liability for third-party content so long as they exercise due diligence and act on court orders.

Do You Know:

• The right to be forgotten is not a standalone statutory right but understood as a facet of the broader right to privacy under Article 21.

• The principle is that an individual should be able to control the use of their personal data, including demanding its removal when it no longer serves a legitimate purpose or causes disproportionate harm.

Indian courts first engaged with privacy and public records in R. Rajagopal v. State of Tamil Nadu (1994), where the Supreme Court held that information forming part of public records could legitimately be reported by the press.

• The doctrine came up in the landmark case of K.S. Puttaswamy v. Union of India (2017), where a nine-judge bench held privacy as a fundamental right. Justice Sanjay Kishan Kaul, in his concurring opinion, said that "an individual who is no longer desirous of his personal data to be processed or stored, should be able to remove it from the system where the personal data/ information is no longer necessary."

• The SC is already examining related questions. In February, it stayed a Delhi HC order directing Indian Kanoon and The Indian Express digital to remove reports concerning a person discharged in an AgustaWestland-linked money-laundering case.

The dispute stemmed from a defamation suit filed by a banker seeking removal and de-indexing of three news reports after he was discharged in a money laundering investigation. The reports were based on his comments, press releases of the Enforcement Directorate and court proceedings.

A bench of Justices B V Nagarathna and Ujjal Bhuyan, however, clarified that the HC order "would not operate as a precedent".

WHAT DELHI HC'S PATHBREAKING RULING ON GOOGLE KEYWORD ADVERTISING MEANS

A recent ruling of the Delhi High Court in a long-running trademark dispute initiated by Hindware Limited could shape how Google handles keyword advertising, especially when trademarks are used in sponsored search results.

In a 163-page judgment delivered on May 22, Justice Mini Pushkarna examined whether a company can purchase another company's registered trademark as a keyword under Google Ads so that their advertisements appear on top of the list when users search for that trademark.

The dispute

In early 2013, Hindware Limited, which is in the business of sanitaryware products, discovered that its rival sanitaryware companies, Grohe India Private Limited and Cera Sanitaryware Limited, had purchased the trademark 'Hindware' as a keyword through Google's AdWords programme.

The result was that whenever a consumer searched for the word 'Hindware' on the Google search engine, the first result that appeared was for the website of Cera. Also, when someone searched 'Hindware Sanitary' or 'Hindware Sanitaryware', the first result came from the website of Grohe.

Hindware argued that its registered and well-known trademark is being used by Google by offering or suggesting it to competitors or any other entity for the generation of advertisements. Hindware said this was being done without their prior consent or approval.

Subsequently, Cera and Grohe settled with Hindware, leaving the core legal battle to continue against Google India and Google LLC.

Keyword advertising

Google runs a programme known as 'Google AdWords', which is a form of keyword advertising that allows advertisers to place advertisements along with search results in their search engine, www.google.com.

Under Google AdWords, advertisers bid for words or phrases called 'keywords' that trigger or generate a sponsored advertisement when a user enters those terms into Google Search.

For example, if someone specifically searches for Nokia or Sony, another company could purchase the keywords 'Nokia' or 'Sony' in return for a fee earned by Google, so that instead of the organic result, i.e., websites of Nokia or Sony, the user would be shown the advertisement or websites of the ad purchaser.

Hindware's objection

Hindware claimed that 'HINDWARE' is a registered and well-known trademark with substantial goodwill built over decades.

The company contended that the use of its trademark as a keyword for the display of advertisements clearly amounts to use of the trademark "in advertising" within the meaning of Section 29(6) of the Trade Marks Act.

It argued that if a consumer specifically searches the term 'Hindware', it is clear that he is specifically looking for their products. The fact that the first search result of another company is shown to the consumer is bound to cause confusion and divert potential customers to rival brands.

Until 2009, Google did not permit the use of trademarks as keywords in India, but the policy was changed post the year 2009. It said that the policy applicable in India is a deviation from the policy of Google followed for countries in the European Union (EU) and European Free Trade Association (EFTA).

Google's defence

Google argued keywords act as a backend trigger for displaying the advertisements in response to the search query entered by a user. Since users cannot see the keywords provided by the advertiser, such use of trademarks as keywords cannot be said to amount to 'use' under the Trade Marks Act.

When multiple advertisers seek to choose the same word as a keyword, including a trademarked term, Google conducts an auction or bidding on the trademarked term and earns a Cost-Per-Click amount as revenue.

On the question of confusion among users, Google argued that the inorganic or sponsored search results are labelled with a prefix 'ad' to distinguish them from organic search results, eliminating the likelihood of confusion among the users.

Judgment's importance

The case touches upon a growing global conflict between trademark law and digital advertising models.

Search engines earn revenue through keyword advertising systems. By auctioning the registered trademark to rivals, Google generates revenue from multiple competitors of the trademark owner.

The court ruled in favour of Hindware restraining Google from using the name 'Hindware' or any combination of related words as part of advertising keywords.

It observed that Google's conduct amounts to "free-riding" as it monetises the investments made by the trademark owner over the years. By actively suggesting, prompting and auctioning trademarks to third parties, the court said Google rides on the goodwill of the trademark's reputation, selling off the power of the mark in attracting consumers to other rivals in order to increase enrolment in its own AdWords Policy and earn more profits.

"In doing so, Google has attempted to sell something that it simply does not own."

Beyond the case

The decision is likely to influence trademark disputes involving online advertising in India. It could affect how freely companies can use competitors' brand names in online advertisements and search results.

"We duly respect and operate in accordance with all local laws, and in instances where the orders are overbroad or inconsistent with our policies, we work to explain our position as per the legal process in the country," Google said in a statement to The Hindu.

"Specifically on our Ads policy on trademark keywords, we have a clear and stated policy that does not allow competitor advertisers to use trademarked terms in the ad-text of an ad. This policy is consistently applied globally and is in accordance with the Indian trademark law."

The company has held that so-called backend use of a trademark keyword is permissible to allow for small firms to compete with established incumbents, and said that it therefore only bans the deceptive use of competing trademark keywords in the actual text of ads, and not in the bidding process.

IS SHOOT-TO-DISABLE THE NEW NORMAL?

The story so far:

The "leg-shot" doctrine appears to have become the new normal in Uttar Pradesh, emerging as a genuine crime-control model that Herbert Packer advocated in 1968, in his work — The Limits of the Criminal Sanction. Between 2017 and 2025, the State Police recorded over 16,000 encounter operations. In about 97% of cases, the accused survived with a bullet wound to the leg. At this scale, the question is no longer whether something unusual happened, but what it means when the unusual becomes routine.

What is Operation Langda?

A motorcycle is intercepted on a highway. The accused attempts to flee. Shots are fired. He is injured, typically in the leg, and taken into custody. This sequence, which now recurs across the State, is now known as "Operation Langda", or "half-encounters", from the Hindi word langda (lame), a policing methodology cultivated by the Uttar Pradesh Police since 2017 under its "zero-tolerance" framework. What may initially have appeared as a sporadic enforcement tactic has, over time, acquired the characteristics of a routine practice governed by a dual logic of incapacitation and punishment.

Refined through repetition, encounters have evolved into a recognisable policing pattern marked by targeted leg injury, standardised reporting, official endorsement and overt punitive logic.

How are half-encounters structured?

A study by the Centre for Criminology and Victimology at National Law University Delhi, based on official U.P. Police data and 100 verified encounter cases (January 2025–May 2026), found that these incidents follow a near-identical sequence: intelligence received, suspect intercepted, alleged attempt to flee or fire, police response in self-defence, gunshot to the leg, arrest, and recovery of a locally made pistol. This seven-step sequence is the standardised operational template of Operation Langda, repeated across more than 30 districts over nearly a decade.

What distinguishes the practice is its focus on incapacitation rather than lethality. By visibly disabling accused persons, it functions as both a disciplinary mechanism and an assertion of state authority. The standardised language of police reports further normalises this extra-procedural punishment by presenting it as routine law enforcement. Nearly 80% of 100 cases in the micro-level dataset used either "retaliation" or "self-defence" as the major justificatory framing, no matter what the alleged offence is.

The consistency of this framing across widely different offences suggests a standardised narrative template rather than case-specific accounts. This helps reproduce the practice across districts as a recognisable policing methodology.

In most of the 100 cases examined, media reports reproduced the police version without critical scrutiny. Critical coverage emerged only when direct counter-evidence challenged the official narrative. As a result, these incidents entered the news cycle largely as routine law-and-order events, that functioned as transmission rather than scrutiny.

The emergence of this methodology must be understood against the institutional constraints faced by the Uttar Pradesh Police. Prior to 2017, conviction rates in several categories of violent crimes were below 20%, while investigative capacity lagged far behind caseloads. In this environment, 'half-encounters' present a pragmatic alternative.

Crucially, shooting to disable rather than kill makes the practice more legally defensible. The accused survives to be produced in court, the officer can claim self-defence, and the state records an arrest rather than a death. This distinguishes the U.P. model from the typical "fake encounter" tradition. It is also a reason why the practice continues to enjoy official support. State data show declines in crimes such as dacoity and robbery, but these gains do not address concerns over due process and the erosion of the rule of law.

Uttar Pradesh publicly treats encounter statistics as indicators of law-and-order achievements. Through official recognition and accelerated promotions, an exceptional tactic has become an accepted metric of policing performance. The incentive structure is reflected in the data: 2,739 encounter operations were recorded in 2025 alone — the highest annual figure in the dataset.

This official endorsement contrasts sharply with established judicial standards. In People's Union for Civil Liberties v. State of Maharashtra (2014), the Supreme Court laid down sixteen principles and mandated an independent inquiry in every case. While these remain the legal benchmark, they have not been systematically applied in the State.

In January 2026, the Allahabad High Court observed that "half-encounter" practices were often driven by official rewards and promotions. The court reiterated that the power to punish belongs exclusively to the judiciary.

What makes reform so difficult?

The central problem is that "Operation Langda" is that it operates as a self-sustaining system. Political endorsement, professional incentives, media transmission and the chronic weaknesses of the criminal justice process do not merely tolerate the practice, they reproduce it. Piecemeal reforms will not be enough. What is most striking is how a practice that sits outside legal norms has, through routine and reward, become part of how the state governs. Any durable reform must dismantle the interlocking incentives and channels that produce it.

LOYAL OPPOSITION

The rout in the West Bengal Assembly election has thrown the Trinamool Congress (TMC) into a tailspin. TMC rebel Ritabrata Banerjee has been formally recognised as Leader of the Opposition (LoP) in the Legislative Assembly after claiming the support of 58 of the 80 MLAs of the party. Abhishek Banerjee, the party's national general secretary and nephew of Mamata Banerjee, had written to the Speaker naming veteran Sobhandeb Chattopadhyay as LoP. Ritabrata Banerjee challenged that decision, with some encouragement and support from the ruling BJP. The TMC had earlier expelled Ritabrata Banerjee and Sandipan Saha, both TMC MLAs, accusing them of anti-party activities after they complained to the Speaker that their signatures on Abhishek Banerjee's letter had been forged. Assembly officials found discrepancies between signatures on the submitted documents and those recorded during the oath-taking of newly elected MLAs, and the government has ordered a CID investigation. Ritabrata Banerjee framed his elevation as LoP as a "collective fight against individualism", pointedly declaring that the resistance was directed at Abhishek Banerjee and pledging loyalty to Mamata Banerjee — at least for public consumption. TMC functionaries are quitting the party in large numbers, even as its workers and leaders, including Abhishek Banerjee, continue to face physical violence.

Having been in power for three consecutive terms, the TMC's collapse has long been in the making, thanks to corruption, authoritarian governance, suppression of dissent, and violence against women. While all this had steadily eroded public confidence in both the administration and the party, the expanding role of Abhishek Banerjee alienated a generation of senior leaders who had built the party from the ground up. Chief Minister Suvendu Adhikari — the BJP's first in the State — was once among Mamata Banerjee's most trusted lieutenants. He resented the rise of the nephew, and was also vulnerable to pressure from central agencies that were investigating serious corruption cases against him. The TMC had no qualms about using state resources, local administrations, and police machinery for its power, but it could not withstand the BJP which is willing to stretch the rules of the game even further. In the TMC versus TMC fight, there will be protracted legal tussles over the status of the two groups that claim to be the legitimate TMC. This episode also highlights West Bengal's decades-long toxic political culture, marked by violence and opportunism. The new LoP was earlier a Marxist leader who defected to the TMC. The BJP has openly stated that several newly elected TMC MLAs wanted to join the party. They seem, instead, to have captured the TMC in the Assembly — a rather curious case of political consensus.

CHANGED ARRANGEMENT

The most prominent face of the Congress in Karnataka, D.K. Shivakumar, is set to realise his long-held ambition of becoming Chief Minister on June 3. By passing the baton from Karnataka's longest-serving Chief Minister, Siddaramaiah, to Mr. Shivakumar, the Congress appears to have resolved a grievance among his supporters, who believed that he deserved the post when the party returned to power in 2023 after leading its poll campaign as State unit president. Evidently, the Congress national leadership appears to have managed the transition in Karnataka better than it did in Rajasthan and Punjab in 2020-21, where its decisions — retaining Ashok Gehlot despite Sachin Pilot's rebellion (2020) and replacing Amarinder Singh with Charanjit Singh Channi (2021) — failed to yield dividends in the Assembly elections. The Congress high command has also carried out the change of guard in Karnataka with an eye on the 2028 Assembly elections. There are symptoms of anti-incumbency sentiment acquiring more strength. As the Congress has chosen Mr. Shivakumar, a Vokkaliga, to succeed Mr Siddaramaiah, the BJP-Janata Dal (Secular) alliance is likely to face the poll together, as otherwise, the two parties gain little politically. Besides, the JD(S)'s top leaders belong to the Vokkaliga community and Mr. Shivakumar has been engaged in a decades-long contest with them for influence over the community, especially in the Old Mysuru region.

If the Congress and Mr. Shivakumar play their cards well, they could break Karnataka's 35-year record of voting out incumbent governments. Having successfully handled political crises, Mr. Shivakumar should by now have a plan for winning in 2028. He must also carry all sections of the party with him and adopt a consultative approach to major policy decisions. Despite implementing several welfare and populist schemes, Karnataka has maintained fiscal discipline under the Congress government. In the just concluded FY2025-26, revenue deficit, at about ₹19,500 crore, is the lowest among similarly placed southern States. While this offers some consolation, Karnataka's total revenue receipts grew by a modest 6.3%. Reducing stark inter-regional disparities should be a priority. In 2024-25, Bengaluru Urban district contributed about 40% of Karnataka's GSDP, while Dakshina Kannada and Belagavi accounted for 5.3% and 3.9%, respectively. Uneven regional development can be seen in the Human Development Index too — Bengaluru Urban with 0.738, while Yadgir (0.538), Kalaburagi (0.539), and Raichur (0.562) are at the bottom. At a time when States, especially those under non-BJP parties, are facing shrinking fiscal and development space, their Chief Ministers should focus on addressing the chronic issues that affect the underprivileged. Mr. Shivakumar's experience can help him fulfil this responsibility.

LANGUAGE DECORUM

The Supreme Court of India has issued notices to the Union Government, the CBSE, and the NCERT, directing them to file a comprehensive report on their logistical preparedness to implement a three-language formula in all CBSE schools for Class 9 students from July 1, 2026. On May 27, while hearing petitioners challenging the CBSE move, the Court declined to grant an immediate stay on the policy but acknowledged that concerns over "hardship and inconvenience" warranted review. The Court will hear arguments on July 15 and 16. The casual manner in which the government is using the CBSE to enforce its contentious language policy once again shows complete disregard for students, teachers, and parents. On May 15, the CBSE had issued a circular mandating the study of three languages for Class 9 students from July 1, citing alignment with the NEP 2020 and the National Curriculum Framework for School Education 2023. At least two of the three must be native Indian languages. Foreign languages such as French or German could only be taken as a third language if the first two were Indian, or alternatively as an optional fourth subject. In a meagre effort to camouflage the hardship unleashed on the students, the CBSE exempted the third language from the Class 10 Board examination, which would instead be assessed through school-based internal evaluations, though the marks would still appear on the final certificate.

Barely weeks earlier, the CBSE had stated that the third-language requirement would be deferred until the 2029-30 academic year. The abrupt turnabout can only be explained as a political decision. The move is being challenged in the Court on multiple grounds, including constitutional ones. The petitioners argue that language is a matter of personal choice and cannot be imposed by the state. It is also being pointed out that the NEP 2020, in whose name the mandate is being enforced, promises flexibility and guarantees that no language shall be imposed on any student or State. The petitioners also argue that the CBSE, as an executive body, lacks the authority to impose such a sweeping educational mandate without backing from parliamentary legislation, regardless of what the NEP says, being an executive policy intent and not a statute. Parents and teachers are alarmed about the added pressure on students just before their Board examinations. School administrators have flagged a shortage of trained language teachers and the unavailability of appropriate textbooks. Turning school education into a cultural battleground is not helping India's ambition to become a global reservoir of advanced human resources. The Centre should course-correct before the Court takes up the case again.

DATA HYGIENE

It is disturbing that some Census 2027 enumerators in States such as Rajasthan and Uttar Pradesh are facing issues for extremely unusual reasons. In these two States where the first phase of the Census — Houselisting and Housing Census (HLO) — is under way, they have been advised to "revisit households and correct the data discrepancies" and "not to select options that may show the government in a poor light". Re-verification is a legitimate part of any study or survey but this must be done to reflect reality accurately, not to manage perceptions. In Rajasthan, the issue arises from a circular of the Director of Census Operations to district-level officials regarding discrepancies identified in field data. Apparently, the objective is to ensure that data are accurately recorded, using appropriate options in the questionnaire. However, in some cases, enumerators have been told to record data based on assumptions. For example, if some households do not have toilets, enumerators have been told to check whether toilets are available nearby, on the basis of which the entry can be changed from "open defecation" to "[having] access to latrine". In Uttar Pradesh, the message seems to be not to present facts as they are, raising concerns about data integrity and reliability for a crucial and sensitive exercise.

The present episode brings to the fore the efficacy of programmes such as the country's long-running campaign against open defecation. While many States have made tangible progress, it would be unrealistic to conclude that the problem has been eliminated. For administrative purposes, including funding, it is reasonable to classify cities and villages on the basis of certain parameters as Open Defecation Free (ODF), ODF Plus and ODF Plus Model. But, the critical question is whether such a classification reflects reality and comes into conflict with the enumerators' work. It is the responsibility of policymakers to ensure that Census data are accurate and credible. They must also sensitise people to provide correct information, as public policies and welfare schemes are formulated on the basis of these data and ultimately benefit them. The authorities must recognise and resolve the legitimate difficulties faced by enumerators. As the significance of the Census hardly needs any reiteration, the Union government should be quite liberal in enhancing allowances for enumerators to ensure efficient and timely work. It should not only be conscious of the financial outlay involved — about ₹11,718 crore for the entire country — but also of the need to make reliable data publicly available for purposes such as targeted and inclusive policymaking. The government should send a clear message that data sanitisation must not be undertaken under the guise of re-verification.

RELIGION AND THE TRIBAL IDENTITY: WHY 'DELISTING' DEBATE REFUSES TO DIE DOWN

When the population census process got underway in Jharkhand on May 16, an appeal began circulating among Adivasi communities: don't mention "Hindu" in the religion column; instead, write "Sarna" — the traditional tribal faith — or "others".

Key Takeaways:

• Around a week later, a large Sangh-affiliated Adivasi gathering in New Delhi demanded "delisting" from the Scheduled Tribes (ST) category for tribal people who convert to Christianity or Islam.

• "Delisting" refers to the demand that tribal people converting to Christianity or Islam should not continue receiving benefits for STs. Among the major voices raising this demand are Adivasi Hindus.

• But another section of Adivasis, from the Sarna community (which does not identify as either Hindu or Christian), argues that if religion becomes the basis for removing tribal status, the same rule should apply to tribal people who have converted to Hinduism.

• This renewed debate around delisting has also raised Constitutional questions around religion and affirmative action. This comes amid the recent Supreme Court observation reiterating that Dalits converting to Christianity or Islam cannot continue to claim Scheduled Caste status under Article 341. However, Article 342, which deals with STs, does not explicitly mention religion — a distinction now central to the debate around tribal identity and conversion.

THE MAJORITARIAN SHADOW OVER ADIVASI IDENTITY, FAITH

Last week, the Janjati Suraksha Manch (JSM) and Vanvasi Kalyan Ashram, both Rashtriya Swayamsewak Sangh (RSS) progeny, held a conclave in Delhi — "Janjati Sanskritik Samagam" — attended by thousands of Adivasis from across the country The stated occasion was the 150th anniversary of legendary hero Birsa Munda. In the vote of thanks, the organisers acknowledged the extensive official machinery behind the gathering — from the Railway Ministry to Union Ministers, Chief Ministers, and senior officials. With Union Home Minister Amit Shah as the chief guest, the event was effectively semi-official. This is precisely why the speeches, demands raised, and the Home Minister's response deserve far closer scrutiny than an ostensibly cultural gathering would normally invite.

The JSM's core agenda against Christian conversions is well known, its main demand being the delisting of all Adivasi communities that have converted to Christianity and the stripping of their constitutional and legal protections on the grounds that they no longer subscribe to Adivasi beliefs. The organisation has run violent campaigns in several States in central India, particularly Chhattisgarh, targeting Adivasi families who have converted to Christianity — campaigns that have gone so far as the forcible exhumation of bodies from graves on privately owned land belonging to Christian Adivasis in tribal villages. In February this year, in a case pending before the Supreme Court of India, the Court issued interim orders restraining such exhumations. Yet, these incidents continue under the patronage of Bharatiya Janata Party State governments.

A foundational distinction

At the conclave, the demand for delisting was framed with reference to the recent Court judgment upholding the Presidential Order of 1950, which holds that persons belonging to Scheduled Castes (SC) who profess a religion "other than Hinduism" do not qualify for constitutional or legal benefits meant for SCs. The JSM's demand is that this principle be extended to Scheduled Tribes (ST) — a move that would require removing what one of its leaders described as "a weakness in the Constitution." What the JSM considers a weakness is, in fact, a foundational distinction: unlike in the case of SCs, neither the Constitution of India nor the law links the identity of STs to religion.

On the conclave stage, alongside portraits of Birsa Munda and a Hinduised image of "Bharat Mata", was a portrait of the late Kartik Oraon — a Congress Member of Parliament who once filed a petition challenging the candidature of two members of the Oraon community from an ST-reserved seat on the grounds that they were Christians. The Patna High Court, in its ruling in 1963, rejected his petition categorically, holding that "tribal identity is not religion-based," that it rests on ethnic and community kinship ties, and that "an Oraon remains an Oraon" regardless of whether he is Hindu, Christian, or Buddhist. The High Court further observed that, by and large, converted Adivasis continued to participate in community festivals and celebrations, and joined others in raising concerns common to all Adivasi communities. This judgment remains the governing legal precedent. The JSM seeks to overturn it, and its method for doing so is chillingly cruel: isolating converted families, forcibly preventing them from attending community festivals, and then using that coercively imposed exclusion as proof that converts have abandoned Adivasi culture, promoting their expulsion from traditional gram sabhas. Exclusion is engineered, then presented as evidence.

A campaign of cooption

Simultaneously, the JSM has been pushing the assertion that Adivasis belong to the broader "sanatan parivar". At the conclave, the organisation's national convenor declared: "They say Adivasis are not Hindus. What is this game? We are Ram's children — this is a conspiracy against us." Another leader proclaimed that "Adivasis exist in the shade of the great tree of Sanatan". The nature of the JSM's "ghar wapasi (homecoming") for converts is unambiguous — functions marked not with Adivasi symbols but those of Hindutva. In the JSM's worldview, Adivasis are "vanvasis" — forest dwellers defined by their service to Lord Ram, subordinate to upper-caste deities, and redeemable only through their blessings. The building of temples with Hindu idols in tribal villages, the rebranding of local deities as forms of Vishnu, Shiva or Durga, and the installation of Hanuman idols at village entry points are all part of this hegemonic cooption campaign.

Adivasis are fully entitled to choose their religion under Article 25 of the Constitution, which guarantees freedom of conscience and religion. There are laws, some quite draconian, to deal with conversions which are "fraudulent". Adivasis may choose to be Hindu, Christian, or of any other faith. But whether an Adivasi worships Ram or Jesus has no bearing on their identity as an Adivasi; this is a fundamental constitutional principle. What cannot be accepted is the distortion of this principle to suggest that an Adivasi who worships Ram is expressing Adivasi culture, while one who worships Jesus is betraying it. Adivasis have long demanded formal recognition of the distinctiveness of their beliefs, of their worship of nature, their animist traditions and practices.

The Jharkhand Legislative Assembly, for instance, adopted a resolution calling for a separate column in the Census enumeration of religion for Adivasis to register their own beliefs, a demand reiterated by Adivasi intellectuals and numerous organisations across the country. But this has been unfairly ignored by the government, insulting Adivasi faith.

The urgent issues Adivasis face

It is this majoritarian agenda that Mr. Amit Shah endorsed going even further by describing the JSM's campaign as a contemporary "Ulgulan". Birsa Munda's Ulgulan was a revolt against colonial rule — and notably, he broke with Christian missionaries precisely because he saw them as instruments of that rule. Mr. Shah's political lineage, by contrast, never fought the British — it compromised with them. To invoke hero Birsa's name and the historic Ulgalan to legitimise a sectarian campaign against converted Adivasis is a grave betrayal of his legacy. Mr. Shah also declared that sanatanis too are nature worshippers, and that jal, jangal, pahad (water, forests, mountains) "is the centre of our beliefs".

His words ring hollow. Even as Mr. Shah spoke, tribal communities in Sijimali and Rayagada in Odisha were fighting to save their sacred mountain from bauxite mining operations approved by his own government. In the Hasdeo region of Chhattisgarh, thousands of Adivasis have spent years fighting against their forests being handed over to private mining companies — forests that were previously declared a "no-go zone," until the current regime decided otherwise. Lakhs of trees have been felled against the decisions of the gram sabhas, among them the sal and karam, the sacred trees around which Adivasi festivals and rituals are organised. The nature worshippers in Delhi have been remarkably efficient destroyers of nature.

The urgent issues before Adivasis are the sabotage of the Forest Rights Act, the virtual elimination of the rights of the gram sabha, the subversion of the Panchayat (Extension to Scheduled Areas), or PESA, the huge backlog in employment in reserved posts, the pathetic condition of Adivasi student hostels and arrears in scholarship payments, and the continuing lack of civic and health facilities in Adivasi areas, to name a few. And through all of this — not once, not in a single instance — has the JSM raised its voice in defence of Adivasi rights against government-enabled corporate takeovers of jal, jangal, and zameen. On the contrary, by splitting Adivasi communities along religious lines, it has served the interests of the very companies that are dispossessing them. Dividing the dispossessed is, after all, the oldest trick in the book.

For those committed to the defence of Adivasi rights, the JSM gathering and the Home Minister's endorsement are indications of the challenges ahead, which can and must be met by the united will of Adivasi resistance and democratic forces in the spirit of the great Adivasi heroes.

GEN SUBRAMANI TAKES OVER AS CDS, PRIORITISES TRI-SERVICES SYNERGY

General NS Raja Subramani Sunday took charge as the new Chief of Defence Staff, news agency PTI reported.

Key Takeaways:

• Subhramani succeeded General Anil Chauhan, who stepped away on Saturday after ending his tenure as the country's senior-most military commander.

• Subramani's primary mandate will be to put in place the military theaterisation plan and strengthen tri-services synergy.

• Taking over as the new CDS, he said, "Transformation of armed forces and organisational reforms to enhance synergy and integration will be the primary focus. We will accelerate the development, induction, and integration of indigenous weapons in our armed forces."

• Known for his expertise on Pakistan and China, Subramani retired as the Vice Chief of Army Staff on July 31 last year, and was serving as the Military Advisor at the National Security Council Secretariat (NSCS) ever since. Throughout his 40-year career, General Subramani served across a wide spectrum of conflict profiles and held numerous Command, Staff, and Instructional positions.

Do You Know:

• The CDS is a high military office that oversees and coordinates the working of the three Services, and offers seamless tri-service views and single-point advice to the Executive (in India's case, to the Prime Minister) on long-term defence planning and management, including manpower, equipment and strategy, and above all, "jointsmanship" in operations.

• In most democracies, the CDS is seen as being above inter-Service rivalries and the immediate operational preoccupations of the individual military chiefs. The role of the CDS becomes critical in times of conflict.

• Most countries with advanced militaries have such a post, albeit with varying degrees of power and authority. The United States Chairman Joint Chiefs of Staff Committee (CJCSC), for example, is extremely powerful, with a legislated mandate and sharply delineated powers.

• He is the most senior military officer and military adviser to the President, and his remit extends to the National Security Council, the Homeland Security Council, and the Defence Secretary.

WHY DO CITIES GET POLLUTED IN SUMMER?

The story so far:

In March, the Commission for Air Quality Management in the National Capital Region and Adjoining Areas (CAQM) revoked all curbs under the Graded Response Action Plan (GRAP), signalling the end of the winter air pollution in Delhi.

A month later, as temperatures rose, it reimposed Stage 1 of the GRAP to combat summer air pollution. It was briefly revoked and reimposed again in May, while North India was reeling under heatwaves.

Why are cities witnessing pollution episodes during summer?

Delhi and the Indo-Gangetic plain are known for winter smog because low temperatures, low wind speeds, and their basin-like topography trap pollutants close to the ground.

Summer brings stronger winds, occasional thunderstorms that wash out pollutants, and warmer temperatures that allow pollutants to mix higher in the atmosphere. Despite such meteorological favours, Delhi has already witnessed 54 days between 1 April and 31 May 2026 where daily average PM10 levels exceeded the 24-hour National Ambient Air Quality Standard (NAAQS) of 100 ug/m3. At the same time, on 40 days, at least one Continuous Ambient Air Quality Monitoring Station (CAAQMS) in the city recorded a breach in the hourly ozone standard of 180 ug/m3.

Unlike most headlines, this is not the story of Delhi alone. Other large cities like Mumbai, Chennai, Hyderabad, Bengaluru, and Kolkata also recorded pollution spikes in the same period this summer, with PM10 and ozone levels going above the national standards to varying degrees. These spikes were shaped by local sources such as vehicular emissions, road dust, construction activity, industrial emissions, and dust from local storms. Mumbai, for instance, has been recording high PM10 and ozone levels over the last few years due to construction activity, dust, and traffic. While Chennai's PM10 breaches are occasional, its high vehicular density and hot weather also make it an ozone hotspot.

How is summer air pollution different from that in winter?

While winter pollution is dominated by finer PM2.5 particles, summer air pollution is driven by the coarser PM10 and ozone.

Vehicles, industries, waste burning, agricultural residue burning, construction sites, and broken roads remain year-round sources of pollution. Winter adds biomass burning for heating. Summer brings in dust storms that hike PM10 levels, while heat and sunlight catalyse ozone formation.

Why does ozone rise in hot weather?

Ozone is not emitted directly from a tailpipe or chimney. It forms when nitrogen oxides (NOx), largely from vehicles and volatile organic compounds (VOCs) from industrial emissions, vehicle exhaust, paints, and other sources, react under strong sunlight. Hotter, sunnier days therefore create favourable conditions for ozone formation, which, along with particulate matter, could cause respiratory illnesses.

What causes India's PM10 to spike?

Hot conditions over the Indian subcontinent create a low-pressure area that extends towards Iran. Its interaction with surrounding high-pressure areas produces hot, windy conditions. These winds could stir up dust storms, including hot winds called loo, which carry dust from West Asia and the Thar Desert across India towards the Bay of Bengal. Such episodes could elevate PM10 levels for days, as seen during the severe North Indian dust storms of 2018.

The Indian subcontinent also experiences shorter, localised dust storms known as 'andhi' that usually subside within hours. These form when strong downward-moving air associated with thunderstorms hits the ground, lifts loose dust, and carries it at high speed. While loo-type dust storms are common in North India, cities like Mumbai and Hyderabad generally face dusty episodes due to local thunderstorms.

Human activity worsens this natural dust load. Construction and demolition work often resumes after the more stringent winter GRAP restrictions are lifted. Without adequate site-level dust control, these activities add to PM10 levels. Vehicles moving over broken roads also further resuspend loose, dry dust into the air in the dry summer months.

What can cities do to combat summer air pollution?

While natural sources of dust cannot be controlled, they can be predicted. Delhi's Air Quality Early Warning System (AQEWS) was created in response to severe dust storms in 2018 and smog episodes of the previous years, and now runs year-round. It has since been extended to other cities such as Jaipur and Mumbai, and provides forecasts of multiple pollutants several days in advance.

Its bulletin provides detailed weather information for Delhi and three-day Air Quality Index forecasts for 140 Indian cities.

The India Meteorological Department (IMD) also publishes national weather forecast bulletins several times a day. Authorities should use these systems to issue local alerts on dust storms, ozone, and poor air quality so citizens can reduce exposure.

For controllable non-natural sources, enforcement matters. Construction sites need active dust management even outside winter.

A study by the Council on Energy, Environment and Water (CEEW) found that simply reducing heavy-vehicle movement at construction sites can lower local particulate matter levels. The Brihanmumbai Municipal Corporation (BMC)'s Air Quality Decision Support System (AQDSS), also developed with CEEW, for example, assists in monitoring construction sites. It has already helped authorities take measures against more than 1,000 sites since October 2025 in Mumbai.

Reducing ozone requires cutting NOx and VOC emissions from vehicles and industries through cleaner transport, better compliance, and attention to solvents, paints, and fuel combustion. Even simple behavioural measures, like the 'Red Light On, Gaadi Off' campaign of the Delhi government that urges drivers to switch vehicles off while waiting at junctions to reduce idling emissions, can reduce ozone formation. But Indian cities need more sustained action.

Delhi has had a summer action plan since 2022. Other cities need similar plans that combine forecasting, public health advisories, construction dust control, road dust management, and action on ozone-forming emissions. Summer may disperse some pollutants better than winter, but heat and sunlight create their own pollution chemistry. Indian cities must plan for both seasons, treating them with equal seriousness.

CAUGHT BETWEEN CONCRETE AND PANIC, INDIA SHOULD NOT MALADAPT TO CLIMATE CHANGE

With more than 7,500 km of coastline and millions of people living in low-lying coastal areas, India faces a dilemma that it has often been told is really a trap: use engineering solutions to hold the line, so to speak, or to beat a retreat inland. While many adaptation experts and institutions in high-income countries have favoured a 'managed retreat' in high-risk coastal areas, governments in South Asia have favoured concrete walls instead. But really, Indians' best bet is an oft-unarticulated third way.

At the COP climate summits and elsewhere, India's representatives, including its Union Environment Minister, have argued that economically developing and under-developed countries deserve an extended off-ramp regarding the use of fossil fuels because these countries cannot abruptly abandon the cheapest source of energy known without also plunging millions of people back into poverty.

There is a strong normative case to apply the same argument to coastal engineering: that using engineering to buy time is India's developmental right.

Maladaptation trap

But is it? The question arises because of social equity. That is, if a government uses its engineering off-ramp to build luxury coastal roads and high-end reclaimed cities, it is less buying time for its people and more walking into the trap of maladaptation. Put differently, engineering must not divert more investments in high-risk zones; if it does, it will only compound the catastrophe that will inevitably result as global warming continues its upward march.

For example, Nigeria has already backed a large land reclamation project dubbed the "Great Wall of Lagos". It will protect valuable real estate and a new financial district from the Atlantic Ocean even as it diverts tidal energy to neighbouring lower-income coastal areas like Alpha Beach. The irony: it will accelerate erosion at Alpha Beach in order to diminish erosion at the financial district. Similarly, to maintain its rice-producing areas, Vietnam built a vast system of high dikes — but they also prevent natural sediments from being deposited by the river, contributing to the Mekong delta sinking faster than the sea is rising.

Closer home, the Kosi river floods almost every year thanks to its massive sediment load and steep descent down the Himalaya. So as it enters the flatter plains of North India, it naturally shifts course. To control this, the Governments of India and Nepal built large embankments under the 1954 Kosi Agreement, from Bhimnagar into North Bihar. Today, because the river is so confined, silt that would normally spread across the floodplain settles on the riverbed itself, raising the water level several metres over the surrounding land. When heavy monsoon rains cause the embankments to breach or overtop, a catastrophic flood ensues.

Managed retreat

Many parts of the Global North are increasingly experimenting with 'managed retreat'. This is one of the four primary strategies for coastal adaptation that the UN Intergovernmental Panel on Climate Change (IPCC) articulated in its Sixth Assessment Report. Managed retreat refers to the purposeful, coordinated movement of people, assets, and/or infrastructure away from areas at risk of environmental hazards. The U.N. and the International Organisation for Migration have also used the term to discuss "planned relocation" as a tool for disaster risk reduction.

As part of managed retreat, the U.S. has used programmes like the Hazard Mitigation Grants to purchase flood-prone homes at market rates prevailing before a disaster, and converting the land into permanent open space. The U.K. has used a "managed realignment", where authorities intentionally breach ageing seawalls to create salt marshes that then serve as natural buffers. New Zealand has been using "red-zoning" to keep developers from rebuilding in high-risk areas.

Overall, managed retreat has primarily taken the form of state-funded buyouts and regulatory zoning. However, it has also benefited from higher capital where it has been implemented and remains politically fraught, often sparking legal battles over property rights and sustaining a class gap whereby wealthy enclaves are fortified while marginalised communities are 'managed' away.

In India, the stakes are obviously different — and arguably higher. For one, its managed retreat has rarely been managed and often plainly chaotic: people are displaced, their social safety nets destroyed, and the poor further pauperised. For example, in 2018, the Odisha government moved more than 500 families in a cluster of seven villages called Satabhaya, which the Bay of Bengal had almost entirely devoured, to a rehabilitation colony in Bagapatia. But while the State provided housing, the families suddenly found themselves transitioning from being the owners of ancestral land to daily-wage labourers in a market for which they had no skills. There are many similar stories in the Sundarbans delta.

In 2024, the Panamanian government began to officially relocate the Guna Indigenous community from a sinking island to the mainland. While the move was 'managed' in the economic sense, the

Guna people's entire identity is tied to the sea, and their new homes on the mainland lacked the ancestral connection and traditional fishing access that sustained them for centuries. Thus they faced a cultural crisis.

'Pioneers', not 'refugees'

There is a third choice hidden between concrete walls and panicked flight — a hybrid strategy that marries law, policy, and engineering. Let us start with an example this time: instead of leaving people to 'retreat' to its overcrowded capital, the Bangladesh government is currently transforming its port of Mongla into, in its words, a "climate-resilient town", with investments in new schools and factories and in creating raised infrastructure. It is a solution that attempts to preserve social equity.

In the same vein, India needs to identify 'receiver cities' in its hinterland and invest in their infrastructure now. More broadly, migration should be a choice — a voluntary plan to relocate to an economically attractive area rather than because the alternative is to drown — and India should facilitate that.

Second, a great barrier to managed retreat in India is a lack of legal land titles for its coastal residents. The country must reform its coastal land laws to formally recognise informal settlements. In turn, the state must treat people displaced by the vagaries of climate change as 'pioneers' of a new national geography who are entitled to state-supported relocation rather than as 'refugees' or even 'encroachers'.

Moving to higher ground

Third, India needs to systematically focus research on and investments into nature-based or hybrid solutions and away from seawalls and reclamation projects. Mangroves, bioswales, and artificial reefs provide a 'soft' defence while also learning to adapt to the ocean's rhythms. Concrete does not do this. Even if a government deems 'hard' engineering to be necessary to protect a critical hub like Mumbai, it must include failsafe mechanisms like buffer zones around seawalls and sacrificial floodplains.

In a tacit acknowledgment that keeping the water out is not sustainable, China has been engineering its coastal cities, including Ningbo and Shanghai, to absorb water by installing permeable pavements and rain gardens and by restoring wetlands.

Most of all, the Indian government and its leaders must not be allowed to argue at the COPs and beyond that India must be allowed to engineer its way out of climate adaptation challenges — certainly not at the expense of social equity. India stands at a crossroads: it cannot afford to surrender its coast to the sea but that is no excuse to lie to itself about the permanence of concrete. Instead, it should lay the legal and economic foundations for a dignified and equitable move to higher ground.

CAN SCHEME TO REPLACE NCR'S OLD TRUCKS AND BUSES CURB POLLUTION?

The Union Cabinet on Wednesday (June 3) approved a two-year clean mobility scheme to reduce air pollution in the Delhi-National Capital Region (NCR) that will incentivise replacement of older trucks and buses with BS-VI or stricter emission-compliant vehicles. Government vehicles will be excluded from this scheme.

Key Takeaways:

— BS refers to Bharat Stage, a set of emission standards to regulate and reduce vehicular air pollution. While BS-IV regulated tailpipe pollutants like nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), BS-VI introduced stricter limits on such tailpipe emissions besides pushing cleaner fuels and advanced onboard diagnostics.

— There have been Union government and Delhi government schemes introduced and implemented in the past few years to incentivise a transition to electric vehicles or BS-VI vehicles, including for buses, such as the PM-eBus Sewa. The new scheme, however, specifically targets BS-IV vehicles as well as older trucks and buses compliant with BS-IV emission norms in Delhi-NCR.

— Delhi-NCR suffers from extreme air pollution and the predominant sources of pollution are transport sector, dust, industrial pollution, and biomass burning. These sources are both local as well as regional within a broader geographical airshed.

— Vehicular emissions remain a key concern as Delhi-NCR's vehicle fleet is high at 2.98 crore vehicles and it is growing at 7% per annum, as per government data. Earlier this year, a meta-analysis of multiple emission source apportionment studies from 2015 and 2010 by a panel of air quality experts attributed 23% of winter PM2.5 pollution and 19% of summer PM2.5 emissions to the transport sector. This expert panel was tasked by the Commission for Air Quality Management (CAQM) in Delhi-NCR to assess reasons behind the worsening of air quality in the region.

— Even as the share of trucks and buses compliant with older emission norms is only 3% of the total fleet, their emission load is disproportionate to their stock. It is estimated that one pre-BS norms heavy-duty vehicle pollutes as much as 14 times of the modern, BS-VI compliant vehicles.

— The official government note on the Cabinet decision stated that even a BS-IV vehicle emits 2.7 times more than its BS-VI counterpart, making the transition to cleaner technology an important step to reduce air pollution.

— "As engines age, components undergo severe wear-and-tear, causing incomplete combustion and massive release of emissions. Replacing old vehicles that met weaker emissions standards compared to the current BS-VI vehicles standards highlights the critical importance of this targeted phase-out," CSE said.

Do You Know:

— Bharat Stage emission norms are India's standards for regulating pollution from motor vehicles. They set legal limits on exhaust emissions of pollutants such as carbon monoxide, hydrocarbons, nitrogen oxides and particulate matter. Each successive BS tightens these limits, pushing manufacturers to adopt cleaner engine technologies, better exhaust treatment systems and cleaner fuel.

— The main difference between BS-IV and BS-VI (which is comparable to Euro 6) is in the amount of sulphur in the fuel. BS-VI fuel is estimated to bring around an 80% reduction in sulphur content — from 50 parts per million (ppm) to 10 ppm.

— The Commission was constituted through the CAQM Act, 2021, which came into force in the same year on April 13.

— The air quality monitoring body is tasked with better coordination, research, identification, and resolution of problems surrounding the air quality index and related matters in NCR and adjoining areas. It has the power to take measures, issue directions and entertain complaints to protect and improve the air quality in the region.

21 KILLED IN HOTEL BLAZE, 12 FOREIGN NATIONALS; BUILDING HAD 26 ROOMS BUT PERMIT ONLY FOR 6

Twenty-one people, including 12 foreign nationals, were killed in a fire that destroyed a ground-plus-five-storey building operating as a bed and breakfast (B&B) establishment in Malviya Nagar in South Delhi on Wednesday morning.

Key Takeaways:

• Police said the foreign nationals belonged to Liberia, Nigeria, and Mozambique in Africa, and Bangladesh. Most of them were medical tourists who had come to India for treatment, or were accompanying patients.

• The hotel, called Flourish Stays B&B, is located in a narrow lane in Hauz Rani, diagonally across the street from Max Hospital in Saket. Senior police officers said there were 26 rooms in the establishment, more than four times the maximum permissible number of six. Most or all rooms in the building are believed to have been occupied at the time of the fire. The building had only one entry and exit. It allegedly did not have a No-Objection Certificate from the Fire Department.

• The tragedy, among the biggest fire disasters of the past few decades in Delhi, came four days after a building undergoing illegal additions collapsed in Saidulajab, another urban village a couple of kilometres away, killing six people, including five young medical and engineering graduates.

• Wednesday's death toll is the highest in a fire in Delhi since the May 2022 fire in Mundka in west Delhi in which 27 people were killed. Before that, 43 people were killed in the Anaj Mandi fire of 2019, and 59 had perished in the Uphaar cinema tragedy of 1997.

Do You Know:

• According to a recent working paper by the PM-EAC, India's "hidden urbanisation" phenomenon has meant that far more Indians live in urban clusters than most estimates suggest; going by the satellite data from the Global Human Settlements Layer, India was already 63 per cent urban in 2015.

• According to global standards, India would need about one firefighter for every 1,000 people to ensure adequate coverage. Given India's population of 1.4 billion, this translates to approximately 1.8 million firefighters. However, the current number of firefighters in India is only around 3,00,000, meaning we are falling short by about 1.5 million firefighters — a staggering gap. On average, each state is short by 14,382 firefighters, and states like Uttar Pradesh, Bihar, and Maharashtra are facing the worst deficits.

• In addition to firefighters, a set of sophisticated fire-fighting equipment is essential to minimise large-scale loss of life and property. Fire trucks and equipment are the tools firefighters need to do their jobs, but even here, the numbers are shockingly inadequate. Uttar Pradesh needs 4,155 more fire trucks, making it the worst-hit state once again. Bihar (2,775 trucks short) and

Maharashtra (2,640 trucks short) also face massive shortages. On average, each state is short by 707 fire trucks, indicating that, even when firefighters are available, they often lack the vehicles and tools needed to respond swiftly.

• A fire station is the central hub for firefighters — a trained force is stationed on high alert to respond fast in case a fire breaks out. But India doesn't have enough of these either. Maharashtra is missing 917 fire stations, the highest in the country, followed by states like Rajasthan (748) and Bihar (543), which also face significant gaps. On average, every state is short by 144 fire stations.

'CARROT EXTRACT CAN MAKE FAKE GHEE DODGE QUALITY TEST'

The red-orange pigment from carrots can make fake ghee dodge a popular quality test to pass off as a premium product sourced from cows, a new study has found.

Researchers from the Indian Institute of Technology (Banaras Hindu University) in Varanasi, Uttar Pradesh, have demonstrated that non-dairy fats, such as palm oil and lard or rendered pig fat, can be engineered to mimic the Raman spectral signature of authentic cow ghee simply by adding a beta-carotene-rich carrot extract.

Cow ghee naturally contains beta-carotene, responsible for its yellowish colour. The researchers are Vineet Sharma, Ajay Kumar Bind, Shreyans K. Jain, and Venkatanarayan Ramanathan. Their study has been published in the latest issue of the Journal of Raman Spectroscopy.

The findings, although based on a small sample size, raise concerns about fraud in India's premium dairy market. They also challenge the efficacy of Raman spectroscopy, a rapid testing technique widely used by food regulators and laboratories.

Named after Nobel laureate C.V. Raman, Raman spectroscopy is considered a powerful analytical quality test. It acts as a molecular fingerprint to verify the exact chemical composition, crystalline structure, and purity of a substance.

The IIT (BHU) team investigated whether the characteristic Raman signatures associated with cow ghee could be artificially recreated with other fats. Previous studies have treated three Raman spectral peaks of beta-carotene — at 1,006, 1,157, and 1,520 cm−1 — as reliable markers for authenticating cow ghee. These peaks are often absent in non-dairy fats.

To test the robustness of these markers, the researchers fortified samples of lard and palm oil with carotenoids extracted from carrots. Both lard and palm oil displayed the same Raman peaks attributed to cow ghee. The fortified fats also acquired the yellow-orange colour similar to cow ghee, making them resemble the dairy product in appearance and spectroscopic profile.

CODEINE CRISIS: IN DRY BIHAR, WHY COUGH SYRUP ADDICTION IS RISING

As Bihar approaches a decade of alcohol prohibition, codeine cough syrups have surged as a cheap substitute, with seizures and addiction cases rising, especially among youngsters and in rural areas.

Key Takeaways:

• The Directorate of Revenue Intelligence (DRI) this week seized 7,500 bottles of codeine-based cough syrup from outside the Rajendranagar Terminal Railway Station in Patna.

The alcohol ban reduced overt alcohol harm but fuelled an underground market for opioid alternatives, straining police, hospitals, and de-addiction centres.

Do You Know:

• Since Bihar enforced alcohol prohibition in 2016, codeine cough syrups have emerged as an increasingly popular alternative to alcoholic beverages. The ban, intended to reduce violence, road accidents, and social harm, has not eradicated substance abuse but has instead fostered new forms of addiction.

• Codeine is a naturally occurring opioid derived from morphine, a compound found in the opium poppy. Used primarily as a cough suppressant, it is found in various medicines, particularly cough syrups, where it works by suppressing the brain's cough centre. It is commonly prescribed for upper respiratory infections or chronic conditions like bronchitis, which cause persistent dry coughs. However, it is not the first-line treatment for the common cold.

• In therapeutic doses, codeine helps manage severe, persistent coughs that don't respond to common treatments like antihistamines. The recommended dosage for adults is typically from 10–20 mg every 4–6 hours, up to a maximum of 120 mg daily. Children under the age of 12 are generally advised to avoid it, as it can be rapidly converted into morphine in their bodies, causing potentially dangerous respiratory complications.

• Even within the prescribed limits, codeine can cause side effects including drowsiness, constipation, nausea, and dizziness. Misuse can lead to respiratory depression — where breathing becomes dangerously slow — as well as tolerance, addiction, and withdrawal symptoms such as anxiety, sweating, and irritability.

• Codeine can also be intoxicating, especially when combined with depressants like alcohol. Overuse can damage the liver, kidneys, and mental health, leading to psychiatric disorders. Hospitals in Bihar are reporting more young people suffering these long-term effects.

PERFECT STORM

India has suffered multiple mass deaths due to consuming illicit liquor, across Tamil Nadu, Gujarat, Punjab, Uttar Pradesh, Bihar, Assam, and Maharashtra. The Malwani incident in 2015, which left over 100 people dead, prompted official promises of systemic reform that never fully materialised — neither there nor elsewhere. The Pune-Pimpri-Chinchwad tragedy unfolded last week with more than a dozen victims of working-class backgrounds in poor neighbourhoods. Preliminary investigation has revealed a better than ad hoc supply chain with industry-grade methanol — the toxin behind most hooch tragedies— brought from outside the State and mixed with ethanol to produce a highly potent country liquor. The demand for licensed alcohol faces high State taxes, encouraging low-income individuals to turn to illicit liquor. On the other hand, adding industrial methanol increases the batch volume at negligible input cost, dramatically improving margins, although some people under investigation have also said during official questioning that it is not in the interest of 'regular' vendors to poison their 'customers'. Nonetheless, such operations are typically semi-visible local economies that get by on tolerance rather than secrecy, and so allegations of police and local authorities' complicity must be investigated. Early enforcement following most deadly incidents only arrests retail vendors; investigations into upstream suppliers and alleged kingpins have frequently proved uneven or inconclusive.

Indeed, these tragedies recur due to a perfect storm of factors that are able to repeatedly come together. One major regulatory gap in efforts to track methanol downstream is how easily it is pilfered and diverted for illicit liquor. Most victims are daily-wage labourers, and scholars have argued that the physical toll of manual labour creates a demand for cheap relief that, together with economic precarity and addiction, outweighs the wariness of poisonous substances. Since the victims are often from marginalised communities, the sustained political will needed to implement reforms — including better methanol accounting and affordable alcohol alternatives, required to break the cycle — is often lacking. In a 2024 analysis, public health experts found that higher prices for legal liquor push the poorest consumers toward the illicit market, which accounts for an estimated 40% of alcohol consumption in India. Likewise, total bans as in Bihar and Gujarat could deflect the market to criminal syndicates, where quality control is optional and oversight is poor. Finally, legal reviews have concluded that while the big fish are rarely caught, even those arrested are rarely convicted. Without these improvements, regulatory loopholes and weak enforcement will sustain illicit liquor as a public health crisis.

JOY AND PAIN

When triumph and disaster arrive at the same time, it is important to celebrate, but also, to take stock, assess, and pivot to address the lacuna. The recently released National Family Health Survey (NFHS)-6 data offer such an opportunity. The data for 2023-24 revealed some remarkable gains for India, but also exposed some unguarded pathways that will become disastrous if not attended to. The greatest of the gains came in the sector of child health — stunting is down by 17%; severe wasting is down 32%; institutional deliveries are at over 90%; and full immunisation coverage for children aged 12-23 months rose to over 87%. Additionally, the figures show that India's Total Fertility Rate (TFR) had stabilised at 2.0, below the replacement level of 2.1 Unequivocally, these are gains; ones that India has been working on for decades. It is an encouraging sign that the needle has finally moved, in these crucial sectors. These gains will have to be built upon, without any drop in service delivery, while remaining uncompromising on access or quality of services in the public sector. However, health managers need to heed the other side of the paradigm as well. NFHS-6 indicates a 'dual public health burden' — obesity (in three years, it had grown from 22.9% to 27.3% among men, while among women, from 24% to 30.7%) remains problematic while some level of malnutrition continues, besides the onslaught of lifestyle diseases. The survey also showed a decline in exclusive breastfeeding among children under six months, from 63.7% in NFHS-5 to 55.8% in NFHS-6. Breast feeding is essential to prevent infant malnutrition.

The NFHS, one of the largest cross-sectional household surveys in the world, could easily be considered the primary tool to define public policy, and evidence-based governance, besides tracking development indicators. The data it generates are crucial. Other India-level data from similar periods indicate similar trends; the SRS and the National Health Accounts Survey reveal the lack of focus or funds for lifestyle diseases, and metabolic disorders. The danger of letting this continue will be known sooner rather than later, as India progresses through a demographic transition to a greyer nation. At this stage, transformations are still possible. Setting up comprehensive screening programmes for NCDs, stressing on nation-wide behaviour change communication on diet and exercise, and ensuring higher taxes on sugared beverages and packaged foods are all techniques that will help reduce, and limit the burden, of NCDs. Bolstering health systems to tackle these NCDs, once they set in, at every level — village, town and city — is also critical.

MISSING FROM NFHS: KEY INDICATORS LINKED TO SEX RATIO, CANCER SCREENING

Several data points from the fifth National Family Health Survey (NFHS) have been omitted from the NFHS-6 factsheet released on May 29, despite questions corresponding to these having been asked during the survey conducted between 2023 and 2024.

Key Takeaways:

• The omitted data points include several population-level statistics, indicators related to women's and children's health, family planning, and data on central government schemes such as the Swachch Bharat Abhiyan (sanitation) and the Ujjwala Yojana (cooking fuel).

• Sources in the Union Ministry of Health and Family Welfare explained that several data points in the NFHS were being reported by other surveys, and the omissions were an attempt at "data harmonisation".

• Omissions include indicators of the population sex ratio, the sex ratio at birth, mortality rates, and the percentages of births and deaths recorded in the civil registration system. The latest factsheet also lacks indicators on access to sanitation facilities, such as toilets, and to clean cooking fuels. Several indicators for women's health were also removed, such as adolescent fertility rate, type of contraceptives being used, whether health workers had counselled women on family planning, and whether they were informed about the side effects of their chosen contraceptive method.

• The fact sheet also removed an indicator of women's access to healthcare services — the out-of-pocket expenditure for each delivery.

• Data on the reach of several health programmes were also removed, including data on children with diarrhoea who received ORS or zinc, HIV awareness and service delivery, and the waist-to-hip ratio, an indicator of abdominal obesity linked to increased risk of diseases such as diabetes and hypertension.

• The data points on screening for the three most common types of cancers — cervical, breast, and oral — were also removed. More than 1.5 lakh Ayushman Arogya Mandirs or primary health centres have been upgraded since 2018 to provide screening and care for non-communicable diseases, including the three cancers. However, the uptake of cancer screening services has been poor. NFHS-5 data showed that only 0.9% of people were screened for breast and oral cancers, and 1.9% for cervical cancer.

Do You Know:

• The NFHS is a large-scale household survey conducted across India to track vital data on health, family welfare, and nutrition. Indicators help policymakers evaluate and design effective public health programmes. The first such survey took place in 1992-93. It is conducted by the International Institute of Population Sciences (IIPS), under the supervision of the Ministry of Health and Family Welfare.

• The NFHS-5 (2019-21) factsheet had 131 key indicators or data points at the national level, while the NFHS-6 factsheet has 101.

INDIA'S 'PARTNER-LESS' POPULATION SHRINKS BUT TN, KERALA BUCK NATIONAL TREND

At a time when there is a conversation around rising divorce rates and changing family structures, fresh demographic data suggests a different reality. The proportion of Indians who are widowed, divorced or separated has declined over the past decade, even as a handful of southern states have moved in the opposite direction.

According to the Sample Registration System Statistical Report 2024, 3.5 per cent of India's population is currently classified as widowed, divorced or separated (W/D/S), down from 4.1 per cent in 2014.

The critical takeaway from the 2024 data is that living without a partner in India remains overwhelmingly a female reality. The figures lay bare a severe structural disparity: men who divorce or lose a spouse are highly likely to remarry, while women overwhelmingly bear the social and economic burden of living out their lives with the W/D/S status.

A decade ago, a massive 6.5 per cent of the total female population was classified as W/D/S, compared to a mere 1.9 per cent of males. While the overall numbers have improved, the gender chasm remains firmly intact. Today, 5.4 per cent of all Indian females carry this status, compared to just 1.6 per cent of males.

DON'T TAKE THAT PUFF: 'HERBAL' CIGARETTES ARE NOT HEALTHY ALTERNATIVES TO TOBACCO

In recent years, several supposedly "healthy" alternatives to cigarettes have been growing in popularity. Among these products are tobacco-free "herbal" cigarettes that market themselves as "safer", "natural" alternatives that can help you with everything from depression to anxiety to stress.

Key Takeaways:

• At first sight, this safety claim would appear to make sense. After all, the most harmful part of conventional

cigarettes is the nicotine in tobacco. A recent study, however, has busted the claim that tobacco-free means risk-free, finding that these "herbal" cigarettes are as harmful as tobacco-based ones, if not more.

Do You Know:

• Herbal cigarettes, unlike regular ones, do not use tobacco as fillers. They instead use herbs and dried flowers — such as clove, basil, mint and cinnamon — that impart different flavours.

And while conventional cigarettes use paper as wrappers, herbal cigarettes use tendu (ebony) leaves — just like bidis, India's most widely consumed smoking product.

Herbal cigarettes are generally longer than a bidi but shorter and thinner than a cigar.

• The study, titled The lure of "Healthier Smoke": Comparative physical, chemical, and oxidative potential characterization of emissions from herbal and tobacco cigarettes, was published on May 17 in the Journal of Hazardous Materials, a peer-reviewed international journal.

Alok Kumar Thakur, the study's lead author who is currently pursuing post-doctoral research on air quality emissions at Colorado State University, told The Indian Express that several of the herbal cigarettes they tested were marketed with claims such as relieving cough, improving sleep or easing anxiety. However, studies on their emissions and toxicological impacts have been limited, he pointed out.

• This study compared emissions from two of India's highest selling tobacco brands and four popular herbal varieties containing combinations of basil, clove, cinnamon, mint, green tea, water lily and chamomile.

• It found that emissions from herbal cigarettes were comparable to or exceeded those from tobacco cigarettes on nearly every metric measured.

CENTRE'S INVESTMENT BODY FLAGGED NICOBAR PORT AS LACKING IN 'STRATEGIC GOALS'

The Public Investment Board (PIB), a Finance Ministry body that appraises large public investments, had on August 2024 termed the proposed International Container Transhipment Port (ICTP) at Galathea Bay in Great Nicobar Island as lacking in "strategic objectives".

Following the August meeting, it had advised the Ministry of Ports, Shipping and Waterways (MoPSW) to include a strategic case in its proposal. A little over a year later, the same project was formally notified as a "strategic project" by the Ministry of Defence, according to records of a March 2026 meeting viewed by The Hindu.

The "strategic" nature of the proposed ₹81,000-crore Great Nicobar Project, which consists of the ICTP, a township, airport, a gas-powered power plant, and a tourism zone, has been the Centre's excuse, since at least 2022, for not making public the contents of a report by a High Powered Committee (HPC) on the cumulative environmental impact of the project.

It has also denied Right To Information requests on environmental clearances for the project on the same grounds.

The PIB's view surfaces in records of meetings held on March 17 and 19, 2026, by another Finance Ministry body — the Public-Private Partnership Appraisal Committee (PPPAC) — tasked with vetting project proposals worth ₹500 crore and above involving a partnership with private players.

The Hindu has viewed the PPPAC meeting records and reached out to the Finance Ministry for comment, but has not received one till press time.

The proposal, sponsored by the MoPSW with the Kamarajar Port Limited (KPL) in Chennai as the implementing agency, sought PPPAC clearance to build the port in two phases and, crucially, approval for ₹12,230 crore as Viability Gap Funding (VGF) to make the commercially marginal project bankable.

VGF is a one-time grant given to support infrastructure projects that are economically justified but fall short of commercial (financial) viability.

Shift in narrative

The PPPAC cleared the proposal "unanimously" though it refused the VGF, recommending instead that the MoPSW use its internal budget for the same.

Earlier this week, Congress MP Jairam Ramesh wrote to Environment Minister Bhupender Yadav that "...the narrative on the Great Nicobar Island Project has suddenly shifted… faced with incontrovertible evidence of its hugely adverse ecological impacts, the Union Government is now emphasizing its supposed strategic rationale."

He added that "...the Great Nicobar Island Project as presently conceived is overwhelmingly a commercial enterprise".

"Until the environment clearance [accorded in November 2022] there was no real reference by the Government of it being a strategic project… and even then it was only the airport [with civilian and military use]," researcher and author Pankaj Sekhsaria, who has extensively documented the project's environmental threat, told The Hindu.

The ICTP is a significant component of the much bigger Great Nicobar Island Development Project and is a Ministry of Home Affairs initiative, with the Andaman and Nicobar Islands Integrated Development Corporation Limited (ANIIDCO) as the proponent of the overall project and holder of environmental clearance.

The 2021 documents that conceived the Great Nicobar programme and the January 2023 Expression of Interest for the port described it as a means of capturing transhipment cargo currently routed through Colombo, Singapore, and Port Klang, with the government estimating annual foreign exchange savings of about $200 million, cumulatively reaching around $1 billion by 2047.

In the last year or so, the project has volubly been cast in a maritime security lens, centred around the threat from China.

MAHARASHTRA CLEARS MINE PROJECT, SAYS NOT IN TIGER AREA; MAPS SHOW OTHERWISE

THE MAHARASHTRA government on May 13 exempted an iron ore mining and processing project in Gadchiroli from wildlife clearance by claiming — incorrectly — it was not located in any tiger corridor, official communications reviewed by The Indian Express show.

Key Takeaways:

• The project proposal involves diverting 9.4 sq km of forest land in Gadchiroli for iron ore extraction and processing by Lloyds Metals & Energy. It received forest clearance on April 15 and environment clearance on May 12, a day before it was exempted from obtaining wildlife clearance.

• According to the project site map submitted by Lloyds to the Ministry of Environment, Forest and Climate Change, the area falls in forest compartments 196, 197, 273, 274, 275, 276, 298, 300 and 301. All but one (300) of these compartments are identified as part of the Tadoba-Indravati tiger corridor in the National Tiger Conservation Authority (NTCA)-approved Tiger Conservation Plan (TCP) of the Tadoba Andhari tiger reserve.

• Under 'Category of Area Required', Lloyds itself identified the project site as a "Tiger Corridor" in its wildlife clearance application submitted in March 2024.

• Yet, records show that on May 13, Maharashtra Chief Wildlife Warden (CWLW) M Srinivasa Reddy exempted the project from obtaining wildlife clearance and recommended handover of forest land to the company, stating that the project area was not within or near any national park, sanctuary, tiger reserve or corridor identified in any TCP.

Do You Know:

• Tiger corridors are vital wildlife pathways that connect tiger habitats, enabling animal movement, gene flow, and long-term survival. Under the Wildlife Act, development projects involving land in or around tiger reserves or corridors require statutory clearance from the standing committee of the National Board for Wildlife. A TCP is a 10-year roadmap for every tiger reserve approved by NTCA.

GIR LION DEATHS NOT ALARMING BUT FLAG NEED FOR MULTIPLE POPULATIONS

In Gujarat's Gir region, eight lions, including cubs, have died due to a suspected Babesiosis infection caused by the Babesia parasite, the state's Forest and Environment Minister Arjun Modhwadia said Friday (May 29). The state Forest Department has isolated lions residing within a 10-km radius of affected areas in Gir Somnath and Amreli districts as a preventive measure, while lions suspected to be affected were being treated, Modhwadia added.

Key Takeaways:

• Gujarat Forest and Environment Minister Arjun Modhwadia said that eight lion cubs have died of suspected Babesia parasitic infection in the Gir region and that reports of their samples, sent to Gujarat Biotechnology Research Center, are expected in three-four days.

• Modhwadia added that there has been no such suspected death of lions in the last two days.

Modhwadia said, "Deaths of eight lion cubs have come to light. And whether the deaths have occurred owing to Babesia or for some other reason, its confirmation can be done only after getting the medical report."

• Babesia, a parasitic disease, spreads through ticks and can cause weakness, coughing and nasal discharge in affected animals.

• The deaths of the big cat cubs due to suspected Babesia infection have been reported in the revenue areas outside the Gir sanctuary, particularly in Gir Gadhada of Gir Somnath and Babra Kot of Amreli districts, he said.

Do You Know:

• Babesia (the parasite) is endemic and prevalent at low levels in livestock, wild ungulates (refers to large mammals with hooves), and even in lions, without causing mortality and without causing symptoms in most cases. Babesiosis is a tick-borne parasitic infection that lions and other wildlife can get from the bite of ticks infected with the Babesia parasite.

In nature, there is a host-parasite equilibrium, so that both co-exist, and this rarely needs an intervention. Domestic livestock along with wild ungulates such as chital, nilgai act as asymptomatic reservoirs of Babesia. Under nutritional or physiological stress, or with other infections, it (Babesiosis) can cause mortality.

• Babesia acts much like malaria. It is a protozoan, like Plasmodium, and it infects and ruptures red blood cells. The symptoms include lethargy, anaemia, enlarged spleen, and high fever. In conditions of stress, co-infections, or genetic predisposition, the infection can cause organ failures and mortality.

• Natural processes are best left unmanaged in wild populations.

NILGIRI TAHR POPULATION RISES TO 1,364 IN TN, 4.68% RISE OVER '25

Tamil Nadu's Nilgiri Tahr population has recorded a steady rise with the third synchronised population estimation conducted in April 2026, putting the count at an estimated 1,364 individuals, showing a 4.68 per cent increase over last year.

Key Takeaways:

— The ungulates, or hoofed animals are an endangered species found exclusively in the Southern Western Ghats.

— The Nilgiri Tahr inhabits the verdant sub-alpine grasslands of the Western Ghats in Tamil Nadu and Kerala, and it plays a vital role in nutrient cycling in the high-altitude mountain ecosystem. It has been accorded the highest protection status under the Wildlife Protection Act.

— In the last two estimation exercises, the state had recorded 1,303 and 1,031 individuals in 2025 and 2024, respectively, thus signalling a positive recovery trend. The results carry a 95% confidence interval of 869 to 2,465 individuals.

— Age and sex data revealed that adult females constituted 38.4% of the observed population and adult males 34.6%, with a male-to-female ratio of 55:100. Yearlings accounted for 15.5% and young animals for 11.5%.

— The Nilgiri Tahr is primarily found in Tamil Nadu and Kerala with its distribution stretching from the southern tip of Kanyakumari to the Nilgiri Hills in the north.

Do You Know:

— The Nilgiri Tahr (Nilgiritragus hylocrius) is a distinctive, mountain-dwelling ungulate endemic to the Western Ghats of southern India. It is one of only three extant Tahr species globally – alongside the Himalayan Tahr (Hemitragus jemlahicus) and the Arabian Tahr (Arabitragus jayakari) – and the only one restricted entirely to the Indian subcontinent. With its specialized adaptation to grasslands close to crags and sheer cliffs, the Nilgiri Tahr serves as a flagship species for the high-elevation habitats of the Western Ghats.

HOW SOUTHEAST ASIA ADAPTED INDIAN IDEAS TO LOCAL NEEDS

Across Southeast Asia, from the Mekong Delta (in present-day Vietnam and Cambodia) to Java island of Indonesia, major archaeological sites reveal how Indian ideas travelled not through conquest but through trade, pilgrimage, and court patronage between 500 AD and 1500 AD. These sites show a layered interaction of Buddhism and Hinduism, reshaped by local ecology, politics, and economy.

Shaivism, trade, and statecraft in the Cham civilisation

In Vietnam, the Cham civilisation built temple complexes like My Son Sanctuary between the 4th and 13th centuries. These brick temples were dedicated primarily to Shiva. Sanskrit inscriptions and linga worship clearly show Hindu influence. Yet the architecture, with its distinct tower forms and decorative motifs, was regionally unique.

The Cham economy relied on maritime trade along the South China Sea, which connected its ports to Indian, Arab, and Chinese merchants. The adoption of Shaivism linked them symbolically to Indian cosmology, strengthening their political authority in a competitive trade environment.

Angkor Wat temple complex of Cambodia

In Cambodia, the monumental complex of Angkor Wat stands as the most famous example. Built in the 12th century by King Suryavarman II, it was originally dedicated to Vishnu, reflecting Hindu royal ideology.

Nearby, Angkor Thom and the Bayon temple later expressed Buddhist influence under Jayavarman VII, who adopted Mahayana Buddhism. The scale of Angkor revealed a hydraulic civilisation, where massive reservoirs (baray) supported wet rice agriculture.

Religion here legitimised kingship. The king was seen as devaraja, or god-king, echoing Indian ideas but adapted to local political needs. Over time, the shift from Hinduism to Buddhism indicated changing patterns of power and patronage, not a rupture. Inscriptions in Sanskrit and Khmer further showed how local scribes blended cosmologies with administrative realities.

Buddhism, kingship, and Thai identity

In Thailand, early sites like Dvaravati (6th–11th century) reflected a strong Buddhist presence, especially Theravada traditions, with distinctive Mon-style sculpture and dharmachakra symbols. Later, Khmer influence introduced Hindu imagery, as seen in places like Phimai. The site of Sukhothai Historical Park (13th–14th century) marked the rise of Thai identity with Theravada Buddhism as state ideology.

Unlike Angkor's grand temple-mountain model, Sukhothai emphasised serene Buddha images and monastic institutions. Economically, this reflected agrarian consolidation rather than vast hydraulic systems associated with the Khmer Empire. Buddhism here supported a moral kingship model rather than divine kingship, where rulers were guardians of the dharma rather than gods.

Theravada, Mahayana, and Hindu traditions in Bagan

In Burma (Myanmar), the vast plain of Bagan (11th–13th century) contained thousands of temples and stupas. Bagan was primarily a Buddhist centre, especially Theravada, though earlier layers included Mahayana and Hindu elements. The kings of Bagan patronised monastic institutions, linking political power with merit-making.

The Irrawaddy river system supported agriculture and trade, enabling temple construction on a massive scale. Pali scriptures, imported from Sri Lanka, shaped religious learning. Unlike the war-driven narratives of the Mahabharata, Bagan's landscape emphasised the accumulation of merit through donation.

Borobudur and Prambanan of Indonesia

In Java, Indonesia, two major sites stood out. Borobudur (8th–9th century) was a massive Buddhist monument built by the Sailendra dynasty. Its mandala structure represented the Buddhist cosmos, guiding pilgrims symbolically towards enlightenment through carved galleries while depicting the path of the Bodhisattva.

Nearby, Prambanan is a Hindu temple complex dedicated to Shiva, Vishnu, and Brahma, built by the Sanjaya dynasty. The coexistence of these two monuments indicated political competition, as well as religious plurality.

Java's position along maritime trade routes between India and China made it a cultural crossroads. Indian epics like the Ramayana were adapted into local theatre, wayang puppetry, and relief sculptures, but always reinterpreted through Javanese aesthetics and values.

Localisation of Indian traditions

Across these regions, the spread of Buddhism and Hinduism was not imposed but negotiated. Indian merchants brought not only goods but also stories, scripts, and rituals. Local rulers adopted Sanskrit titles, built temples, and patronised monks to enhance legitimacy.

Yet these rulers didn't just borrow these ideas, they reshaped them. For example, the devaraja cult in Cambodia had no exact parallel in India. The God-king was a charismatic ruler who, by the power of Tantrik rituals, was able to attract around him talent, opportunity, security, and prosperity.

Theravada Buddhism in Thailand and Burma developed distinct monastic networks with their own ordination lineages. Here, the kings were seen as defenders of the Dhamma and sometimes as Bodhisattvas. Cham temples in Vietnam adapted Indian forms to local materials and aesthetics. We find images of dancing Shiva and sleeping Vishnu.

Active participant, not passive recipient

Economically, all these sites were linked to trade networks across the Bay of Bengal and the South China Sea. Ports connected inland capitals, moving spices, textiles, and ceramics alongside religious texts. Agricultural surplus, especially rice cultivation, funded temple construction and sustained monastic communities. Religion became a language of power, linking local rulers to a wider cosmological order.

These archaeological landscapes showed that Southeast Asia was not a passive recipient of Indian civilisation. It was an active participant. Buddhism and Hinduism provided vocabulary, but the grammar was local. The result was a series of hybrid cultures, where Indian gods, Buddhist ideas, and regional politics came together to create something entirely new.

SHORT NEWS

HAN SEONG-SOOK

— South Korean President Lee Jae Myung has chosen Han Seong-sook, the country's Minister for small and midsize businesses and startups, to be Prime Minister of the country.

— If approved by Parliament, Ms. Han would become South Korea's first female Prime Minister in 20 years.

INDIA-INDONESIA

— External Affairs Minister S Jaishankar and his Indonesian counterpart Sugiono held bilateral talks on 7th June as the two nations agreed to advance cooperation in defence, maritime security, digital connectivity and infrastructure.

— Jaishankar co-chaired the 8th India-Indonesia Joint Commission Meeting with Sugiono in New Delhi.

— From the struggle against colonial powers, democratic traditions and pluralist culture, India & Indonesia share deep linkages. Independent India and Indonesia became chief votaries of the independence of Asian and African countries, the spirit of which led to the Bandung Conference of 1955 and later formation of NAM in 1961. Indonesia is a key pillar of India's Act East Policy.

INDIA-NEPAL

— India and Nepal completed the internal processes to enforce the mutual legal assistance pact to tackle "cross-border crimes", as the visiting Foreign Minister of Nepal, Shishir Khanal, met External Affairs Minister S Jaishankar.

— This is the first official visit by the Nepalese Foreign Minister after the new government led by PM Balendra Shah assumed office in March this year.

— Both Ministers welcomed the completion of internal processes for entry into force of the India-Nepal Mutual Legal Assistance Agreement in Criminal Matters (MLAA).

— This Agreement will benefit the people of India and Nepal by providing an institutional legal framework to enhance the effectiveness of investigation, prosecution and judicial proceedings relating to cross-border crimes.

— The ministers jointly launched the Peer-to-Peer (P2P) linkage between Unified Payments Interface (UPI) of India and National Payments Interface (NPI) of Nepal for facilitating cross-border personal remittances, the MEA said.

NATIONAL PANCHAYAT AWARDS 2025

— The awards, conferred by the Ministry of Panchayati Raj annually, recognise outstanding local rural bodies across the country for their contribution towards the Localisation of Sustainable Development Goals (LSDGs) and excellence in grassroots governance.

— This year, 42 panchayats from 17 states and union territories were selected for the two categories of awards – Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar (DDUPSVP) and Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar (NDSPSVP).

— Out of the 42 panchayats, the maximum 6 were from Karnataka, followed by Andhra Pradesh (5), Kerala (4), Telangana (2) and Tamil Nadu (1). Odisha also stood among the best performers, with 5 panchayats from the state winning the awards.

NATIONAL AWARDS FOR E-GOVERNANCE (NAEG)

— The Union government has named 17 projects of the Central, state, and local governments across the country as the winners of the National Awards for e-Governance (NAeG).

— Ten projects would be given the Gold Award, six would be awarded the Silver Award, and one Jury Award during the 29th National Conference on e-Governance (July 1-2, 2026) in Jaipur, Rajasthan.

— The theme of this year's conference, "Viksit Bharat 2047: AI-Enabled, Data-Driven and Secure Digital Governance."

— NAeG Awards are presented every year to recognise and promote excellence in the implementation of e-Governance initiatives by the Department of Administrative Reforms and Public Grievances (DAR&PG), Government of India. These awards have been given since 2003.

— The winners of this year include the Agriculture Ministry's platform for farmers, known as Agri Stack; the Consumer Affairs Ministry's e-Jagriti platform for filing complaints; Panchayat Advancement Index (PAI) of the Ministry of Panchayati Raj and the Prayagraj Mela Authority's conduct of the Mahakumbh 2025.

What is e-governance?

E-governance, or electronic governance, refers to using digital technologies such as the internet and other Information and Communication Technology (ICT) tools by governments to deliver public services, provide information and communication, conduct transactions, and promote active citizen participation in governance. The most important goal of e-governance is to improve transparency, accountability, and responsiveness.

GOVT WAIVES IMPORT DUTY ON COTTON TILL OCTOBER 30

The government on Saturday announced removal of 11% duty on cotton starting June 1 till October 30 to boost cotton availability for India's textile industry amid the ongoing West Asia crisis. This is the second time in the last 12 months that the duty has been removed.

A similar relief measure was extended to the industry last year after the US imposed steep tariffs on Indian exports. The Ministry of Textiles said that the temporary duty exemption is expected to reduce input costs across the textile and apparel sector, thereby providing a targeted relief to manufacturers and consumers, while also keeping the interests of domestic farmers in mind.

WORLD ENVIRONMENT DAY 2026

World Environment Day 2026: It is celebrated on June 5 every year to raise awareness about degrading environmental conditions and to encourage people globally to take positive environmental actions, to help create a better future.

WORLD YOGASANA CHAMPIONSHIP

World Yogasana Championship: Prime Minister Narendra Modi inaugurated the first World Yogasana Championship in Ahmedabad, Gujarat on 4th June, 2026.

FLEX-FUEL VEHICLE

— India's largest carmaker, Maruti Suzuki India has launched the WagonR Flex Fuel, billed as the country's first mass-market flex-fuel passenger car, marking a significant step in India's push towards alternative fuels. On June 5, Union Petroleum and Natural Gas Minister Hardeep Singh Puri launched the "E85 fuel" at a retail fuel outlet in New Delhi.

— The car is capable of running on pure ethanol (E100), although it has been homologated to run on E85 fuel—85% ethanol and 15% petrol.

— Technically, it means the car can run on various fuel blends, from E20 to E100, but given that approved standards in India are up to E85, the car has been certified to use ethanol blend of up to 85%.

— Flex-fuel vehicles are equipped with modified internal combustion engines that can run on petrol, ethanol, or any combination of the two without requiring manual adjustments by the driver. Sensors in the vehicle detect the fuel blend and automatically alter engine settings such as fuel injection and ignition timing to ensure optimal performance.

— NITI Aayog officially classifies ethanol-based Flex-Fuel Vehicles (FFVs), including vehicles running on high ethanol blends such as E85, as Zero-Emission Vehicles.

— According to the government, ethanol blending in petrol has increased from less than 1.5% in 2013-14 to 20% in 2025-26, achieving the 20% blending aim five years ahead of schedule.

Ethanol

Ethanol, or ethyl alcohol, is a liquid that has several uses. At 95% purity, it is called rectified spirit and is used as the intoxicating ingredient in alcoholic beverages. At 99%-plus purity, ethanol is used for blending with petrol. It is a common type of biofuel, a renewable fuel derived from biomass, from plants or agricultural, animal, domestic, and industrial biowaste. Biofuels are significantly cleaner than conventional fossil fuels, though lifecycle impacts vary based on feedstock and production methods.

'CARBON RULES, SUSTAINABILITY NORMS MAKE ESG A COMPLIANCE PRIORITY FOR INDUSTRY'

Frameworks such as the EU's carbon tax and the proposed Carbon Credit Trading Scheme by India are rapidly transforming environmental, social and governance (ESG) practices from a voluntary disclosure exercise into a key business and compliance priority for industries, say experts. Without credible carbon data systems and traceable reporting mechanisms, companies could face increasing compliance risks and competitive disadvantages in global markets, they said.

MEPHEDRONE

— In a major operation, the Sakinaka police busted an illegal mephedrone manufacturing unit in Gujarat and seized contraband worth nearly Rs 75 crore.

— Mephedrone, which has various street names such Meow Meow, White Magic, M-Cat and Drone, is a synthetically manufactured stimulant of the amphetamine and cathinone category.

— According to the laboratory and scientific services portal of United Nations Office on Drugs and Crime (UNODC), "Cathinone, the principal active ingredient in leaves of the khat plant also known as catha edulis, can be considered as the prototype from which a range of synthetic cathinones have been developed."

CAMP IV — THE FINAL STOP BEFORE CLIMBERS MAKE THEIR SUMMIT ATTEMPT

— Mount Everest's highest camp – Camp IV- has once again come under scrutiny after a viral video revealed large amounts of waste scattered across the snow-covered site.

— Located on the South Col between Mount Everest and Lhotse, Camp IV sits at an altitude of around 26,000 feet. It serves as the last resting point before climbers enter the notorious "Death Zone" on their way to Everest's 29,032-foot peak.

INDIA'S 100TH RAMSAR SITE

— On the occasion of World Environment Day, Prime Minister Narendra Modi announced on X the addition of India's 100th Ramsar site – Jai Prakash Narayan Bird Sanctuary (Surha Tal) in Ballia, Uttar Pradesh, to the list of Wetlands of International Importance.

— In 1991, 'Surha Taal' was created with the consolidation of the land area of 45 villages of Baansdih in Ballia town area, aggregating to a total of 3432.93 hectares area. In 2002, its name was changed to "Jai Prakash Narain Bird Sanctuary".

— It is situated a distance of 10 kms away from the Ballia City area, stretching up to Bhikampur village to its west, Singhauli in the north-east and bounded by Dulwara Village in the south-east direction. It falls under the jurisdiction of Ballia and Baansdih town area.

— Surah Taal is a natural perennial oxbow lake (also called a meander lake) which serves as a critical wintering ground for avian species traveling along the Central Asian Flyway. According to UP Eco tourism, it is also a major source of irrigation and groundwater recharge, supporting both wildlife and the nearby farming landscape.

IN TRAVELS OF BUDDHA'S SACRED RELICS, INDIA'S SOFT POWER OUTREACH

The day the Piprahwa relics landed on the small airstrip in Leh, hundreds of people gathered to catch a glimpse. Once the relics were on their way to Jivetsal, to be displayed for two weeks, Leh saw an unprecedented traffic jam that extended as far as the eye could see. This wasn't the first time the Buddha's relics had come to the valley, though – they had been brought to Leh for a public exhibition earlier in 1950.

MAULANA BARKATULLAH

— The executive council of Bhopal's Barkatullah University has passed a proposal to change its name to Vagdevi Bhojpal University.

— Maulana Barkatullah Bhopali was a freedom fighter and the 'first prime minister of independent India', as he, along with some associates, most notably Raja Mahendra Pratap, set up India's first 'government in exile' in Kabul in 1915. This was one of the first times that Indians had set up their own independent political body outside British control.

— Maulana Barkatullah is believed to have been born on July 7, 1854, in Bhopal. A meritorious student, he went to Bombay and then London for studies. He then started teaching in Liverpool, where he came into contact with Indian revolutionaries.

— Barkatullah firmly believed that the British could be driven out of India only if Hindus and Muslims fought shoulder to shoulder and resisted the divide-and-rule ploy.

— Four years later, the leaders of this 'government' travelled to Moscow to meet Vladimir Lenin, the head of government of Soviet Russia.

— After the British victory in the First World War, the Indian revolutionaries' plans suffered major reverses. However, Barkatullah kept travelling to Brussels, Switzerland, France, etc., working for his cause.

— In 1927, despite his failing health, he travelled to California in the US for a Ghadar Party event. This is where, in September 1927, he breathed his last. He was laid to rest in Sacramento, with Raja Mahendra Pratap by his side till the end.

MARJANE SATRAPI

— Marjane Satrapi, the Iranian-French graphic novelist and filmmaker, died at the age of 56. She is best known for her autobiographical graphic novel Persepolis, which she later directed as a film.

— Satrapi, born in 1969 in Rasht in northern Iran, was from a long line of Iranian aristocrats.

— In 1983, her parents – politically active Marxists who participated in demonstrations against the shah – sent her to Austria to finish her studies as the 1979 Iranian revolution brought Ayatollah Ruhollah Khomeini to power, along with growing religious fundamentalism.

— She returned home due to homesickness and attended the University of Tehran, obtaining a degree in visual communications, which would lay the foundation for her artistic path, before leaving once more in 1994 for France.

FIFA WORLD CUP 2026: THE TRIONDA

— Trionda is the name of this World Cup edition football, designed by Adidas (official sponsor). The ball needs to be charged for 90 minutes for six hours of play. This is because it contains a sensor inside — something Adidas first adopted with the Al Rihla ball used at the 2022 World Cup in Qatar. This is how "connected ball technology" works.

— It has the lowest number of panels ever used to make a football. And, unlike the mercurial Jabulani ball used during the 2010 World Cup, it promises far fewer surprises than what many players had to contend with in South Africa.

— The Trionda has a 500 hz 'inertial measurement unit' motion sensor inside one of its four panels, with counterbalances placed on all other panels as well to ensure that its flight remains true. An inertial measurement unit measures and reports an object's specific force, orientation, and how fast it rotates or revolves around an axis.

— The sensor will be complemented by pitchside sensors, which track player movements. FIFA has also chosen to scan each footballer at the tournament, and VAR will also use a 3D digital avatar of the player.

— Combine all this information gathered — add AI to the mix — and FIFA and Adidas believe there lies a path to issuing lightning-fast offside calls and other VAR checks like accidental handballs and accurate player tracking.

— The 2026 FIFA World Cup will start on June 11. The game is being hosted by three hosts: Canada, Mexico, and the US.

FRENCH OPEN 2026

— Mirra Andreeva (Russian) defeated Maja Chwalinska (Polish) in the French Open final in straight sets to clinch her maiden Grand Slam title.

— Mirra Andreeva, 19 years old, became the youngest player to win the women's singles title since Monica Seles in 1992.

— The French Open called Roland Garros, is played on clay soil. It is one of the four Grand Slams.

— The Australian Open, French Open, Wimbledon and US Open are considered a notch above regular tour events. They are jointly called Grand Slam tournaments.

BUSINESS AND ECONOMY

THE CLOUD IS THE NEW FRONTIER OF DIGITAL SOVEREIGNTY

Building sovereign application-layer infrastructure while remaining structurally dependent on foreign cloud, foreign AI, and foreign chips is an unresolved vulnerability — one that the Nayara episode previewed and future geopolitical turbulence will test again.

Key Takeaways:

• Last year, Nayara Energy — one of India's largest oil-refining companies — received a notice that should have alarmed every policymaker in Delhi. Microsoft informed the company that it might have to discontinue its cloud services, citing US sanctions compliance obligations arising from Nayara's Russian shareholder, Rosneft.

• Nayara was operating within Indian law. Its refinery is on Indian soil. But the digital infrastructure on which it ran its operations was leased from a company headquartered in Redmond, Washington — and was, therefore, subject to American law. The threat was not ultimately executed, but India had just glimpsed what digital dependence looks like when geopolitics turns hostile.

• The Nayara episode is a reminder of something we have been slow to reckon with: Microsoft's cloud, Amazon's AWS, and Google's infrastructure are, in the truest sense, digital infrastructure. Hospitals run on them, banks clear transactions through them, government agencies store data on them, and entire supply chains depend on them. That dependence comes with a condition: The terms can change, and the switch can be thrown, from a boardroom in another country.

• Not all digital infrastructure carries the same risk. Private digital infrastructure — the clouds, platforms, and algorithms built by global technology firms — is a commercial asset, governed by the laws of their home jurisdictions. They can be monetised, restricted, or weaponised. Then there is the digital public infrastructure (DPI), which a country builds to serve its citizens on its own terms.

Do You Know:

• Cloud systems are on-demand, internet-based services that deliver computing resources—such as servers, data storage, databases, and software—hosted in remote data centres rather than on local hardware. Instead of purchasing and maintaining expensive in-house IT infrastructure, businesses rent these resources.

• Big businesses need cloud systems primarily for scalability and cost efficiency, allowing them to instantly scale IT infrastructure up or down to meet fluctuating demand without heavy capital investment.

• A BLOCK by a cloud system provider can log out a client company from accessing its own data, communication channels and other tools and products. This can critically endanger operations in sectors such as telecom, energy and financial services. This is the reason why the government seeks greater control over such digital infrastructure.

• According to PIB, the Enhancement of National Informatics Centre (NIC) National Cloud Services project, launched in 2022, seeks to upgrade the national cloud infrastructure, enabling faster and more efficient delivery of e-Governance services.

THE NEED FOR STRENGTHENING INDIA'S EV SUPPLY CHAINS

India's electrification of road transport has entered a decisive growth phase. Around 2.5 million vehicles were sold in FY26, a significant increase from FY25. This momentum reflects the effectiveness of policy support from both the Centre and the States, including upfront purchase incentives, road tax exemptions and other demand-side interventions. These measures helped create the initial market, reduce consumer hesitation, and establish electric vehicles (EVs) as a credible and tested technology.

Import dependence

The next phase of EV adoption demands a different policy and industrial logic. As the sector scales, India is moving away from imported fossil fuels, only to find itself becoming increasingly dependent on imported lithium-ion batteries. The challenge is no longer how quickly India can electrify transport, but how it can do so without creating a new strategic vulnerability. EV growth must now be judged by three additional metrics: supply chain resilience, strategic autonomy, and long-term sustainability.

India's domestic cell manufacturing is still far below the scale needed to alter import dependence meaningfully. Under the ACC Battery Production Linked Incentive scheme, 40 GWh of capacity has been awarded, but only about 1 GWh has been installed so far. Meanwhile, passenger EVs sold in India are sourcing batteries from 14 global manufacturers, with 7,987 MWh imported in 2025. Of this, a significant share came from Chinese manufacturers, highlighting that increasing EV sales are tightly correlated with increasing imports from China.

This concentration creates a structural risk for Indian EV OEMs (original equipment manufacturers). Battery supply is increasingly exposed to a single-country ecosystem that is shaped by policy, geopolitics, and industrial strategy outside India's control. Several developments in China are influencing pricing and availability, like tighter technology restrictions, prioritisation of domestic demand, withdrawal of VAT exemptions on battery exports, and more. Additionally, the West Asia conflict has compounded the pressure through higher raw material costs, elevated manufacturing expenses in China, and rising transport and risk premiums.

The consequences extend beyond OEM balance sheets. Battery inflation delays price parity with internal combustion engine (ICE) vehicles and slows the shift from early adopters to mass-market buyers. In a market as price-sensitive as India's, rising cell costs can confine EVs to premium segments and place national adoption targets at risk if the situation persists and OEMs are forced to pass on higher costs to consumers.

This requires a holistic situational assessment and identifying key interventions in the short to medium term. The near-term response must be pragmatic. Many OEMs already talk of a "China + 1" sourcing strategy, but actual supplier diversity varies widely by segment. Higher-end EVs are increasingly paired with non-Chinese NMC batteries, while cost-sensitive mass-market models continue to rely on cheaper Chinese LFP cells. True diversification, across suppliers, chemistries, and geographies, may raise costs initially; but it significantly lowers the risk of strategic disruption over time.

Product modifications

The cost shock should also drive product-level discipline. OEMs need to design EVs around efficiency, lighter architectures, more effective drivetrains, smarter software calibration, and battery right-sizing aligned with actual usage rather than aspirational range. India's market may ultimately reward lean, purpose-built electrification over oversized vehicles designed around imported battery economics. Software-defined battery platforms that support multiple chemistries without hardware redesign would further improve flexibility as the cell market evolves. Moreover, Indian manufacturers should begin type-testing vehicles across emerging chemistries, including sodium-ion batteries. Sodium-ion is not yet a full substitute for lithium-ion across all use cases, but it could serve as a meaningful hedge as production scales domestically, broadening the technology base and reducing dependence on any single chemistry or supplier.

Further, India's path forward lies in building a structured 'EV supply chain alliance' with trusted partners, one that spans minerals, manufacturing, technology, and standards. Such an alliance would distribute risk across geographies, deepen domestic capability over time, and ensure that no single external disruption can stall India's electrification agenda.

The EV transition is no longer straightforward and the recent disruptions underscore the need for a more resilient approach. India has already demonstrated that it can create demand for clean mobility. The next test is whether it can build the industrial depth to sustain that demand without becoming dependent on a single external bottleneck.

'CHEAP' GLOBAL MONEY FLOW INTO INDIA DRYING UP

The Reserve Bank of India's annual report for 2025-26 has expressed concern over "elevated" sovereign bond yields and possible "reversal" of monetary easing (read interest rate hikes) by global central banks, in response to the West Asia crisis-induced inflationary pressures.

Key Takeaways:

• That concern has also been articulated by the government's chief economic advisor V. Anantha Nageswaran. In a recent opinion piece for The Indian Express, he has pointed to the "end of the era of quantitative easing and near-zero interest rates", while calling it "perhaps the single most consequential development in global capital markets" in recent times.

Do You Know:

• A government bond is basically a debt instrument issued by a sovereign authority to borrow money for a specific, predetermined period. In return, the issuer promises to pay a fixed annual interest over the life of the bond and also return the original borrowed amount on its maturity date.

Government bonds are considered to be the safest or close to "risk-free" assets, as their payments are backed by the sovereign's power to tax or even print money. Government bond yields, in turn, serve as a benchmark for setting interest rates across other fixed-income securities – by establishing the "minimum" return investors would expect for their money over a comparable period.

• Negative yields are possible in scenarios of deflation (falling prices of goods and services) or the issuing country's currency appreciating (like the Japanese yen was prone to). The investor will make money if the inflation rate is even more negative or converts the same Japanese yens into more of his own currency (say, dollar). Negative yields are also common in times of extreme economic uncertainty, when investors choose safety over returns; a minus 1% bond yield would be less of a loss than a double-digit fall in stock market values.

• When global money was cheap, India was a beneficiary of capital flooding emerging markets in search of higher yields.

—Net capital flows into India surged from \$8.3 billion in 1998-99 to a record \$107.9 billion in 2007-08. It collapsed to \$7.8 billion in the 2008-09 financial crisis year, but averaged \$67.3 billion annually between 2009-10 and 2023-24. The tide turned in 2024-25, with net inflows of just \$18 billion. The first nine months of 2025-26 saw net capital outflows of \$580 million.

—Foreign capital may still return to India. But it would probably require India offering a more compelling “pull” story (higher GDP and earnings growth prospects) than a “push” from cheap global money that is now history.

BOND YIELD VS BOND PRICE: THE INVERSE RELATIONSHIP EXPLAINED

How government bond prices and yields move in opposite directions — and what the shape of the yield curve signals about the economy.

A bond is a loan you give to the government

Government Securities (G-Secs) are tradable instruments issued by the Central or State Governments to borrow from the public. The government pays you annual interest (coupon) and returns your principal at maturity. G-Secs carry practically no default risk — they are called risk-free gilt-edged instruments.

Under Section 45ZB of the amended RBI Act, 1934, the central government is empowered to constitute a six-member Monetary Policy Committee (MPC) to determine the policy interest rate required to achieve the inflation target. The first such MPC was constituted on September 29, 2016.

Face Value

The original price of the bond — typically ₹100. The government repays this exact amount at the end of the bond's tenure.

Coupon Payment

Fixed annual interest paid by the government. Example: ₹5 per year on a ₹100 bond = 5% coupon rate. This amount never changes regardless of market conditions.

Yield (Effective Return)

Yield = Coupon ÷ Market Price. Unlike the coupon, yield is not fixed — it changes as the bond's market price changes in response to demand.

As bond price rises, yield falls — and vice versa

A 10-year G-Sec with face value ₹100 pays a fixed coupon of ₹5. If two buyers compete for this bond, the market price gets bid up. The coupon stays fixed at ₹5 — but as the price rises, the effective yield falls. At ₹125, the ₹5 coupon delivers exactly 4% yield.

Bond yields track the prevailing interest rate in the economy

If the economy's prevailing rate is 4% and a new G-Sec offers 5% yield, investors rush to buy it. Demand pushes the price up and yield down — until yield converges with the 4% market rate at a bond price of ₹125.

G-Sec yield exceeds market rate

Investors spot a better return than what the economy offers. Demand for the bond surges.

Rising demand pushes price up

Competitive bidding raises the bond's market price above its face value of ₹100.

Fixed coupon, falling yield

The ₹5 coupon stays unchanged. As market price rises, the effective yield (₹5 ÷ price) falls towards the market rate.

Equilibrium restored

Price settles at ₹125 — where yield equals the 4% prevailing rate. Excess demand stops.

"If market interest rate levels rise, the price of a bond falls. Conversely, if interest rates or market yields decline, the price of the bond rises."

A graph that reveals what the market expects from the economy

A yield curve plots yields of government bonds of equal credit rating across different maturities. Its shape — normal, flat, or inverted — signals the market's collective view on growth, inflation, and future risk.

- **Normal Curve (Upward Sloping):** Longer-tenure bonds offer higher yields — investors demand more reward for longer lock-ins. Signals a growing economy. A steeper slope = faster expected growth.
- **Flat Curve:** Short and long-term yields are nearly equal. Signals marginal or slowing growth — investors see little difference in risk across time horizons.
- **Inverted Curve**: Recession Warning: Longer-tenure yields fall below short-tenure yields. Investors expect sharp future growth decline and lower money demand. Historically a reliable predictor of recession.

TO DRAW FUNDS, PROP RUPEE, GOVT SCRAPS FII CAPITAL GAINS, WITHHOLDING TAX ON BONDS

Amid pressure to attract foreign funds and also stabilise the rupee, the Centre on Friday scrapped the capital gains tax, both long-term and short-term, on investment by Foreign Institutional

Investors (FIIs) in government bonds as well as the withholding tax they must pay on their interest income from these debt instruments.

Key Takeaways:

— At present, FIIs pay 12.5% tax on long-term capital gains, 30% on short-term capital gains, and around 20% withholding tax on interest income.

— The decision, taken after at least two months of internal discussions, is expected to bring tens of billions of dollars in foreign fund into government debt over the coming years, and bridge to some extent the looming balance of payments (BoP) deficit that economists estimate could even touch $60 billion in 2026-27.

— FII investment in government bonds stands at Rs 3.75 lakh crore, or just 3.34% of the available amount of Rs 112.42 lakh crore, under the so-called General Route and Fully Accessible Route (FAR). These are the two ways in which foreign investors invest in Indian government securities.

— A BoP deficit exerts pressure on the rupee to weaken. While the rupee has gained some ground since nearly breaching the 97-per-dollar mark last month, it is down 5% since the war began on February 27 and has slumped 10.3% in the last one year.

— As such, the removal of the two taxes on Indian government bonds could boost inflows at a time when Foreign Portfolio Investors (FPIs) have pulled out $28 billion from Indian stock markets so far in 2026.

— As India is a net importer of goods, it suffers from a large merchandise trade deficit. While the surplus from India's services trade can cover some of the merchandise trade deficit, it is not enough, resulting in what is called a current account deficit, or CAD.

— Until recently, India has been able to attract enough money from abroad in the form of Foreign Direct Investment (FDI) and FPIs to more than make up for the current account deficit.

— This results in a positive net number, or a BoP surplus, which is the difference between the money Indians send abroad to pay for imports and make investments and the money India receives from overseas for exports and in the form of remittances and what foreigners invest in India – be it in the stock market and bonds or direct investment in the form of factories on the ground.

— However, foreign investments into India on a net basis have slowed down sharply in recent years as interest rates across the world have risen, with net FDI in 2024-25 and 2025-26 combined being under $9 billion. This has led to the BoP being in deficit to the tune of $5 billion in 2024-25 and $31 billion in the first three quarters of 2025-26

INDIA'S BALANCE OF PAYMENTS — UPSC EXPLAINER

Everything you need to know about India's BoP — its components, current data, and the 1991 crisis that changed the economy forever.

India's national ledger with the world

The Balance of Payments records every financial transaction between India and the rest of the world. Money coming in is marked positive. Money going out is marked negative. It captures the relative demand of the rupee vs foreign currencies — a critical indicator of economic health.

Two main accounts

BoP has two components — the Current Account (day-to-day trade in goods and services) and the Capital Account (investment flows like FDI and FII).

Exchange rate link

If Indians demand more dollars than Americans demand rupees, the dollar gets more expensive. BoP data reflects this push-pull between currencies in real time.

RBI's role in a surplus

When India runs a BoP surplus, the RBI absorbs excess dollars into forex reserves — preventing the rupee from over-appreciating and undermining export competitiveness.

BoP = Current Account + Capital Account

Day-to-day trade in goods and services

The Current Account records ongoing transactions — trade in physical goods and 'invisible' services. It has two key sub-divisions: the Balance of Trade (goods) and Invisible Trade (services, transfers, income).

Current Account = Balance of Trade + Invisibles

- **Balance of Trade —** Goods: Export and import of physical goods — cars, wheat, gadgets. A trade deficit (imports > exports) raises demand for dollars and puts downward pressure on the rupee.
- **Services — Invisibles:** Trade in IT, banking, and tourism. Called 'invisible' because no physical good crosses the border. India consistently runs a surplus here, led by IT and software exports.
- **Transfers & Income — Invisibles:** Transfers include remittances sent home by Indians working abroad — a major inflow for India. Income covers returns earned from overseas investments.

Investment flows, not day-to-day consumption

The Capital Account captures cross-border investment activity. Unlike the Current Account, these transactions are about ownership of assets and financial instruments — not purchase of goods or services.

- **FDI — Foreign Direct Investment:** Long-term investment in Indian businesses, factories, and assets. More stable and sticky — less likely to exit suddenly during periods of global stress.
- **FII — Foreign Institutional Investment:** Shorter-term portfolio flows into Indian stocks and bonds. More volatile — FII outflows can rapidly weaken the rupee during global uncertainty.

- **Recent rupee slide: a capital account story:** India's recent rupee depreciation — amid oil price fears and the West Asia conflict — has been driven more by capital account pressures (FDI/FII outflows) than by the current account deficit.

DATA UPGRADE: NEW WPI, PPIS ON JUNE 15

The release of a revised WPI series and an output PPI continues the government's overhaul of India's official statistics, with the CPI, GDP, and IIP having been updated so far in 2026.

Key Takeaways:

• The commerce ministry, on June 15, will release the new Wholesale Price Index (WPI) series with 2022-23 as the base year, starting with data for May as well as a back-series from April 2023 onwards. However, this new year series will in all likelihood be discontinued after five years in 2031 and the Producer Price Index (PPI) based on output prices will become the main measure of non-retail inflation.

• While inflation based on the Consumer Price Index (CPI) is the most widely considered measure of price increases in the country for households and used by the Reserve Bank of India (RBI) to decide interest rates, the WPI is crucial too and used in price escalation clauses in the supply of raw materials, machinery, and construction work.

• For example, in long-term sales and purchase contracts, WPI inflation is used by companies as an indexing tool to adjust terms to account for changes in prices in the future. The Ministry of Finance's Department of Expenditure will issue a circular on the same, Praveen Mahto, Principal Economic Adviser in the commerce ministry's Department for Promotion of Industry and Internal Trade (DPIIT), said on Tuesday.

• Along with the new WPI series, the commerce ministry will, on June 15, also release three different types of Producer Price Indices. These include the monthly output PPI – for May as well as a back-series starting from April 2023 – and a monthly input PPI for the manufacturing sector on an experimental basis starting with March. It is expected the input PPI trial will last for around a couple of years, during which time the quality of data is examined and feedback from the users of data and other stakeholders are discussed.

• The new WPI series as well as the release of an output PPI continues the government's overhaul of India's official statistics.

• Earlier this year, the Ministry of Statistics and Programme Implementation (MoSPI) not only updated the base years for CPI and GDP data but also improved the methods used to calculate these key economic indicators.

• On Monday, MoSPI released its revised Index of Industrial Production (IIP) series, with 2022-23 as the base year. MoSPI is also working on the services sector counterpart of the IIP.

• The output PPI helps measure the prices received by producers and excludes net tax as well as trade and transport margins. A year-on-year change in the output PPI will be the output PPI inflation. To begin with, the output PPI will contain 125 items. Once the WPI is discontinued, the items in the output PPI will be disaggregated and rise to around 1,500.

• According to officials, while the output PPI is similar to the WPI, the input PPI is closer to CPI.

Do You Know:

• The Index of Industrial Production (IIP) is a key macroeconomic composite indicator that measures the short-term changes in the volume of production within an economy's industrial sector during a given period, relative to a fixed base year.

—In India, this critical statistical metric is compiled and published monthly by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI).

• The Consumer Price Index (CPI) in India is a key macroeconomic indicator that measures the average change over time in retail prices paid by households for a specific basket of consumer goods and services. It is the primary metric used to track the cost of living and headline retail inflation. It is compiled and published monthly by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI).

• The Producer Price Index (PPI) is an economic indicator that measures the average change in selling prices received by domestic producers for their output. Unlike the retail-focused Consumer Price Index (CPI), it tracks inflation from the supply side by capturing price changes at the factory or farm gate before they reach the consumer.

• The Wholesale Price Index (WPI) in India is a key macroeconomic indicator that measures the average change in the prices of goods traded in bulk at the wholesale or producer level, before they reach retail consumers. It is primarily used to track wholesale inflation and evaluate the supply-and-demand dynamics in industry, manufacturing, and construction. The WPI is calculated and published monthly by the Office of the Economic Adviser (OEA), which operates under the Department for Promotion of Industry and Internal Trade (DPIIT) within the Ministry of Commerce and Industry.

NEW INDEX OF INDUSTRIAL PRODUCTION (IIP)

Why it matters

India's industrial output grew by 4.9% in April, higher than the 3.2% growth recorded in March, according to the new Index of Industrial Production (IIP) data series released by the Ministry of Statistics and Programme Implementation (MoSPI). Let's understand what the IIP is all about and recent major changes introduced in it.

Core Concept:

— As the name suggests, the Index of Industrial Production maps the change in the volume of production in Indian industries. More formally, it chooses a basket of industrial products — ranging from the manufacturing sector to mining to energy, creates an index by giving different weights to each sector and then tracks the production every month. Finally, the index value is compared to the value it had in the same month last year to figure out the economy's industrial health.

— Major Changes in New Series of All India IIP

1. **Revised Base Year:**

   The MoSPI has revised the base year of the IIP from 2011–12 to 2022–23 to make the index more representative of the current structure and dynamics of the industrial sector.

2. **Expanded scope and coverage:**

In the new IIP series, the coverage has been broadened by incorporating an entire new sector- Gas Supply and Water Supply, Sewerage & Waste Management activities, while retaining the existing three core sectors—Mining, Manufacturing, and Electricity.

3. **Revamped Item Basket:**

The item basket and weights have been revised to add relevant commodities and remove outdated ones. The revised basket consists of 1,042 products mapped to 463 item groups as compared to 839 items mapped to 407 item groups in 2011-12 series. Examples of included and deleted items are:

— Additions: Cards with a magnetic stripe, CCTV camera, Articles of non-woven textiles, Parts of aircraft and spacecraft, Stents, Vaccine (other than veterinary).

— Deletions: Kerosene, Fluorescent tubes and CFLs, Tubes for bicycle/ tricycle/ rickshaw tyres. Tubes for LMV tyres, Printing machinery, Sewing machines.

4. **Updated Weights:**

The weights are updated in the new IIP based on the latest data on Gross Value Added from the National Accounts Statistics (base 2022-23) at the sectoral level and the Annual Survey of Industries at NIC-2/3/4-digit for the financial year 2022-23.

— The Office of Economic Adviser within the Department for Promotion of Industry and Internal Trade releases the Index of Eight Core Industries (ICI).

– The base year of ICI is 2011-12. It measures the combined and individual performance of production of eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity.

— According to the Ministry of Commerce and Industries, the Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production. The Petroleum Refinery Products has maximum weightage with 28.04 per cent.

All India IIP Base Year: Revisions So Far

This is the 10th revision of base year of All India IIP. The first IIP was prepared with base year 1937 and thereafter the base year has been revised successively to 1946, 1951, 1956, 1960, 1970, 1980-81, 1993-94, 2004-05 and 2011-12.

DOMESTIC SOLAR CELL MANDATE: HOW NEW RULES MAY SQUEEZE SMALLER MANUFACTURERS

Only locally manufactured solar cells can be used in domestic, commercial and industrial solar projects starting June 1, according to a Union government mandate.

Key Takeaways:

— Cells — components that convert sunlight into electricity — are the building blocks of solar modules, the panels used to generate power. This domestic cell sourcing mandate is aimed at reducing India's dependence on imports and strengthening the domestic solar manufacturing ecosystem.

— But it has also raised concerns. India has a large solar module manufacturing base, nearly 200 gigawatts (GW) per annum. But the manufacturing capacity of cells, the primary constituents of these modules, is far lower at around 30 GW. This means much of the module manufacturing capacity has been built upon imported cells.

— The new move, therefore, could disproportionately affect smaller solar module manufacturers which, unlike larger companies, may not manufacture their own cells. Industry insiders have also raised concerns that the mismatch in cell and module manufacturing capacity could lead to potential market consolidation.

— First, let's understand how solar panels are manufactured. The process begins with polysilicon, which is processed into ingots. These ingots are sliced into wafers, which, in turn, are used to manufacture solar cells. These cells are subsequently assembled into modules, or panels.

— Under the new mandate, all "net-metering" and "open access" solar projects commissioned after June 1 will have to use domestically manufactured solar cells.

— Net-metering projects largely refer to rooftop solar installations — such as those under the PM Surya Ghar: Muft Bijli Yojana — where consumers can offset electricity bills by supplying surplus power back to the grid.

— Open access projects mainly cater to commercial and industrial consumers procuring renewable energy directly from developers.

— Although developers had sought an extension of the deadline, the government clarified on May 25 that there would be "no blanket" relief. Limited relaxations would instead be granted on a case-by-case basis for projects where module installation had already been completed or where developers have already made significant progress, such as land acquisition, connectivity arrangements or installation of solar modules.

— The new mandate has sparked concerns among module manufacturers, particularly non-integrated players — those without internal cell manufacturing facilities.

— Industry executives cautioned that such companies could face significant supply risks as they would now be forced to procure domestically manufactured cells from larger competitors that also operate in the module market, potentially creating an uneven playing field.

— According to experts, the timing of the transition has added to the stress. India's solar module manufacturers are currently grappling with overcapacity and weakening export opportunities amid steep US tariff barriers.

— However, a divergent view is also emerging within the industry, with several manufacturers viewing the new mandate as a relief of sorts and offering a strong policy push for the investments being made in India's domestic solar manufacturing ecosystem.

— They maintain that concerns over limited domestic cell manufacturing capacity are overstated, especially because large utility-scale solar projects bid out before August 31, 2025 have been exempted from the domestic sourcing requirement for solar cells. According to them, this significantly reduces immediate pressure on domestic cell supplies.

CENTRE CLEARS RS 10,000 CR TO KEEP ATF PRICES STABLE

Amid elevated prices of aviation turbine fuel (ATF), or jet fuel, in the international market, the Union Cabinet on Wednesday approved a one-time budgetary support of Rs 10,000 crore to public sector oil marketing companies (OMCs) for them to provide stable fuel pricing for scheduled Indian airlines for their domestic as well as international flight operations.

Key Takeaways:

• The government expects this arrangement, which will be in place for three years, to ease the pain for the OMCs as well as Indian airlines in the prevailing environment of extreme fuel price volatility. It also expects the move to rein in runaway airfares due to fuel price pressure.

• According to the government, this price stabilisation fund mechanism will provide greater predictability in fuel costs by adopting a fixed-price arrangement, thereby reducing the airlines' exposure to sudden fuel price spikes. The facility will only be available to Indian airlines, and not to foreign carriers. It will be implemented through an agreement between the airlines and the OMCs, under which the carriers will have to procure ATF exclusively from the OMCs for up to three years, "subject to annual review or until the advance amount is fully recovered, whichever is earlier".

• The strain forced Air India to substantially curtail its international flight operations for the June-August period. The airline has also reduced domestic flights due to the impact of high international fuel prices on its overall operations. Indian airlines had made repeated pleas to the government to stabilize jet fuel prices, while also seeking parity between fuel prices for domestic and international flights.

• The implementation will be overseen by a monitoring committee of the Ministry of Civil Aviation (MoCA), Ministry of Petroleum & Natural Gas (MoPNG), and the Department of Expenditure. This committee will also oversee claim verification, reconciliation, and settlement, and all claims and recoveries shall be subject to audit.

Do You Know:

• According to PIB, the Government has notified an amendment to the Aviation Turbine Fuel (ATF) (Regulation of Marketing) Order, 2001 (ATF Control Order) vide notification dated 17 April 2026. The amendment has been issued as an administrative measure to bring Aviation Turbine Fuel blended with Sustainable Aviation Fuel (SAF) under the ambit of the ATF Control Order.

• SAF consists of specially processed aviation grade hydrocarbons, that are chemically similar to ATF and fully compatible with aircraft engines. SAF does not alter the fundamental nature, safety, or performance of aviation fuel. Inclusion of SAF for aviation use undergoes International Civil Aviation Organization (ICAO) recognised rigorous testing process for aviation engines as per ASTM International and only after such extensive procedure, SAF is accepted for use in aviation.

• As recognised by ICAO, SAF is a renewable fuel derived from alternative feedstocks such as crops, biogenic residues, and waste materials, offering significant reductions in GHG emissions.

LIFE AND SCIENCES

BLUE MICROMOON

Why it matters

On Sunday (May 31), an astronomical event known as a "micromoon" was seen in the night sky, and it was also a "blue moon". Let's take a look at this astronomical event and know the science behind them.

— Though the expression "once in a blue moon" implies a rare or unusual occurrence, a blue moon is not that rare an astronomical event.

— There are a few definitions of a blue moon. One that is most commonly understood — and endorsed by NASA — describes a situation when a full moon is seen twice in a single month. Because the new moon to new moon cycle lasts 29.5 days, a time comes when the full moon occurs at the beginning of a month, and there are days left still for another full cycle to be completed.

— Such a month, in which the full moon is seen on the 1st or 2nd, will have a second full moon on the 30th or 31st. According to NASA, this happens every two or three years.

— Sometimes, smoke or dust in the air can scatter red wavelengths of light, as a result of which the moon may, in certain places, appear more blue than usual. But this has nothing to do with the name "blue" moon, and the association of the colour with the term is unclear.

Micro moon

— The size of the moon, as perceived from earth, is dependent on its location within its orbit around the earth. The moon's orbit is an elongated or stretched-out circle and it takes 27.3 days to orbit the earth.

— According to NASA, the moon is about 363,711 km away at its closest to earth, known as perigee. At apogee, or the furthest point, the moon is about 403,945 km away.

— A smaller-than-usual moon is observable when the Moon's fully illuminated phase occurs within a short time of apogee. On the other hand, a supermoon occurs when the moon is passing through or is close to its perigee.

— Notably, when seen in terms of both (Blue and micomoon) phenomena happening simultaneously, then it is a rare event. "Although the next micromoon occurs next month, and the next blue moon at the end of 2028, the next blue micromoon will not occur until 2053," NASA stated.

LUNAR ECLIPSE

— There are two types of eclipses: lunar and solar. During a lunar eclipse, Earth's shadow obscures the Moon. During a solar eclipse, the Moon blocks the Sun from view.

— Lunar eclipses occur at the full moon phase. When Earth is positioned precisely between the Moon and the Sun. Solar eclipses occur only at the new moon phase, when the Moon is positioned between Earth and the Sun.

— Types of Lunar Eclipses

1. Total lunar eclipses: The Moon moves into the inner part of Earth's shadow, or the umbra. Some of the sunlight passing through Earth's atmosphere reaches the Moon's surface, lighting it dimly. Colors with shorter wavelengths — the blues and violets — scatter more easily than colors with longer wavelengths, like red and orange.

2. Partial lunar eclipse: An imperfect alignment of Sun, Earth and Moon results in the Moon passing through only part of Earth's umbra. The shadow grows and then recedes without ever entirely covering the Moon.

3. Penumbral eclipse: The Moon travels through Earth's penumbra, or the faint outer part of its shadow. The Moon dims so slightly that it can be difficult to notice.

WEBB TELESCOPE CAPTURES WEATHER ON EXOPLANET 700 LIGHTYEARS AWAY

"Cloudy with a chance of rain" — imagine astronomers turning into meteorologists and issuing weather reports like this, but for alien planets.

According to a new study published in Science on May 21, scientists were able to use the NASA James Webb Space Telescope (JWST) to peer closely at an exoplanet nearly 700 lightyears away, and deciphered the weather patterns on it.

Named WASP-94A b, this exoplanet is almost twice as large as Jupiter but with only half the mass. It orbits very close to its parent star — so close that it takes just four days to complete a whole revolution.

Extreme worlds

Gas giants like WASP-94A b with scorching atmospheric temperatures are called 'hot Jupiters' and have their orbits tidally locked, meaning their rotation is synchronised with their revolution. As a result, the same side of the planet always faces the host star, much like the moon's tidally locked orbit keeps one side always facing the earth.

WASP-94A b's dayside is thus a sweltering desert with temperatures hot enough to melt rock while its nightside is perennially dark and frozen as temperatures dip to nearly absolute zero.

Astronomers have always been intrigued by the bizarre weather patterns on the 6,000 or so exoplanets they have found so far. But in the absence of a sufficiently powerful telescope, they have had no way to study these far-flung bodies.

NASA's launch of the James Webb Space Telescope (JWST) in December 2021 was the gamechanger. The unprecedented sensitivity of its instruments — which allow the telescope to discern the details on a small coin from a distance of 50 km — has helped scientists study exoplanets' atmospheres like never before. Many of these worlds have turned out to be rocky; some are even almost earth-like. But on some other exoplanets, scientists have found extreme temperatures and pressures producing rain of molten metal and vaporised rock. Still others have downpours of molten glass pushed by supersonic winds. Some gaseous exoplanets even have crystallised carbon raining down as diamonds.

As state-of-the-art instruments like the Extremely Large Telescope, which Europe is currently building in northern Chile, become operational, astronomers could discover many exoplanet nurseries around distant stars, increasing manifold the possibility of finding more extra-solar earth-like planets and, who knows, even a true earth twin.

'A world far beyond'

Hot Jupiters though are the most studied exoplanets. The latest JWST discovery has found that WASP-94A b in particular has a dynamic weather system: its mornings are blanketed in clouds of magnesium silicate, iron, and magnesium sulphide while the evenings sport clear skies.

"The clouds appear to form on the cooler night side of the planet, sweep across the globe with extremely fast winds, and then disappear as they reach the hotter dayside," Sagnick Mukherjee, lead author of the study and a postdoctoral fellow at Arizona State University, said. "This is a direct measurement of an extreme weather cycle unfolding on a world far beyond our Solar System." Astronomers characterise the atmospheres of distant exoplanets using spectroscopy: light is split up into its various wavelengths, followed by measuring the intensity of each one. If the planet has an atmosphere, it will absorb some of the light. This will create a gap in the set of wavelengths arriving at the spectrometer. Since each molecule absorbs light of fixed wavelengths, it is easy to identify the compounds present in the atmosphere.

BOLIDES: FIREBALLS GOING BOOM

On May 30, a meteor exploded over northeastern U.S. while producing loud booming noises. NASA scientists said the object broke apart around 64 km above the ground as it was falling at more than 1,20,000 km/hr. The energy the explosion released was estimated to be equivalent to around 300 tonnes of TNT.

Experts often call these objects bolides. A bolide is an exceptionally bright meteor that breaks apart or explodes in the earth's atmosphere. These objects are originally small pieces of rock or metal in space that, after a close encounter with the earth, enter the atmosphere as meteors. As such a meteor falls, the air in front becomes compressed and heated, causing it to glow and produce a bright streak of light across the sky.

Most meteors are very small and burn up completely before reaching the ground. However, larger ones can survive for longer. If they become bright enough, they become fireballs. And if they fragment violently and release a large amount of energy, astronomers often call them bolides.

The rock or metal is usually some small fragment left behind by asteroids or, less often, comets. They orbit the sun until their paths intersect with that of the earth. When they enter the atmosphere, they can travel tens of kilometres every second. The loud booms are the resulting shockwaves.

A famous example is the Chelyabinsk bolide, which exploded over Russia in 2013, generating a powerful shockwave that damaged buildings and injured more than a thousand people.

FROM STUDENTS TO AUTHORS, USERS TURN TO AI DETECTORS DESPITE QUESTIONS OVER ACCURACY

The story so far:

Since OpenAI's ChatGPT debuted in 2022, users have been experimenting with AI to write and publish human-sounding content at scale. According to a May 2026 report by digital consulting firm Graphite, the number of "primarily AI-generated" articles published on the internet equals the number written by humans.

While the research methodology is debatable, its findings point to a growing need for transparency in authorship as readers want to know whether government circulars, work emails, social media captions, academic papers, text messages, news articles, and even books were written by humans or chatbots.

AI-detection toolmakers claim their products are dependable and that readers who want to know whether something was written using AI or not can use them to confirm the authenticity of content. But how accurate are these tools in spotting AI generated text?

How are AI text detectors used?

Popular AI text detection tools are easy to access online, catering to a wide variety of users such as students, educators, social media managers, business experts, and content creators.

They tout high accuracy rates and training standards. Some of these platforms offer free trials or limited checks where the user can paste a short text passage and have it analysed for signs of AI-generated or AI-assisted content. In order to evaluate longer drafts or get help in editing AI text, users will have to sign up for a paid plan.

Multiple AI text detectors also offer plagiarism checking features, or "humanisers" that claim to make AI-generated content look more natural, so as to evade detection by other AI text detectors.

As frontier AI models from companies such as OpenAI, Google, and Anthropic continue to mature and produce more human-sounding text with fewer machine-generated "tells," these AI text detection tools must evolve in tandem or risk throwing out inaccurate results.

Some popular AI text detection tools include Pangram, Quillbot, ZeroGPT, Grammarly, and Turnitin.

Can AI text detectors be trusted?

This is the billion-dollar question — literally speaking. As Generative AI tools become accessible to just about anyone with an internet connection, people worldwide are looking for ways to detect AI-generated writing. Meanwhile, many writers want to hide their reliance on AI models for reputational reasons.

AI text detectors are still prone to producing false negatives, where they classify AI-generated work as being human-made, or false positives, where they classify original human work as being partially or wholly AI-generated. The latter is an urgent problem, as it can lead to disciplinary action being taken against students and academics, even if they developed their work through honest means. False positives can also lead to social media trolling and career-impacting consequences.

Turnitin, in particular, has seen several such cases and admitted to the potential for false positives. The company noted that it was a "powerful tool" but "not infallible."

More worryingly, the company's website noted that "literary flair or a scholarly voice that strays from the norm can throw Turnitin for a loop," leading to confusion when assessing the uniqueness of writing.

When The Hindu ran 186 words of a 2010 Pulitzer prize-winning foreign journalism feature through several trending AI detection platforms, the results varied wildly: Pangram and Quillbot both classified the text as being 100% human written, while ZeroGPT said that it was 49.9% AI.

Pangram is often cited as a trusted AI text detector on social media; it claims to detect AI-generated content with 99.98% accuracy, and stated it was reviewed positively by third parties including the University of Maryland and the University of Chicago.

Pangram's popularity is also due to efforts by CEO and co-founder Max Spero, who actively promotes the tool on X (formerly Twitter) and cites its results to claim outright that trending pieces were generated with AI. On the flip side, Pangram has also stated that for text under 75 words, the results may be less accurate.

This brings up another problem: how much trust can everyday users place in the accuracy of commercial AI text detectors when their very business models depend on users signing up to paid plans in order to access AI text "humanisers" and other rewriting tools?

Have AI text detectors been used to accuse authors?

In March 2026, American author Mia Ballard's horror novel Shy Girl was cancelled by publisher Hachette over allegations of AI writing, while Ms. Ballard was trolled online. Two months later, the Commonwealth Foundation defended its judging process after a few regional winners of its 2026 Commonwealth Short Story Prize were hit with AI accusations — namely the Trinidadian writer of East Indian heritage, Jamir Nazir, whose story The Serpent in the Grove was one of the five shortlisted winners.

In both cases, many social media users cited the results of AI text detectors in order to claim that the works of authors Mia Ballard and Jamir Nazir showed signs of being AI-generated. Specifically, Pangram was used to accuse both Ms. Ballard and Mr. Nazir of submitting AI writing. Though some users feel that being flagged by AI text detectors was clear evidence of creative dishonesty, others fear these still-experimental AI tools could wrongly damage the careers of authors and academics.

Razmi Farook, Director-General of the Commonwealth Foundation, stated that AI checkers were not used in the 2026 short story judging process. She was concerned about the ethical implications of submitting "unpublished original work" to an AI checker.

Ms. Farook further expressed disappointment at how the work of other feted writers and winners had faced scrutiny; Pangram AI published results claiming that it found more stories showing signs of AI use among the 2026 and 2025 Commonwealth short story prize winners.

All the shortlisted writers this year had personally stated that no AI was used, according to Ms. Farook, who highlighted that AI detection tools were "not unfailing or infallible," and that the competition had to operate on the principle of trust until a reliable detection process was available.

AI-ENABLED BALL FOR BETTER DECISIONS, FEWER SURPRISES

Every four years when the FIFA World Cup comes around, official sponsor Adidas creates a new iteration of the ball that will be used. This time, as the world further integrates artificial intelligence (AI) models into everyday use-case scenarios, the humble football now finds itself an AI-enabled entity, loaded with a sensor specifically built to track its movements.

Key Takeaways:

— But the Trionda, this edition's ball, is notable for more than its modern sensor. It has the lowest number of panels ever used to make a football. And, unlike the mercurial Jabulani ball used during the 2010 World Cup, it promises far fewer surprises than what many players had to contend with in South Africa.

— The Telstar ball was created for the 1970 FIFA World Cup. Made of 32 panels, it was coloured black and white so that it would be more clearly visible to television audiences in a pre-colour TV era.

— Its iconic design is what immediately comes to mind when you think of a football. It is from this foundation that the modern football has evolved.

— Trionda is like an electronic appliance — it needs to be charged for 90 minutes for six hours of play. This is because it contains a sensor inside — something Adidas first adopted with the Al Rihla ball used at the 2022 World Cup in Qatar.

— This is how this "connected ball technology" works. The Trionda has a 500 hz 'inertial measurement unit' motion sensor inside one of its four panels, with counterbalances placed on all other panels as well to ensure that its flight remains true. An inertial measurement unit measures and reports an object's specific force, orientation, and how fast it rotates or revolves around an axis.

— Football authorities are attempting to cut down the often prolonged decision-making time that has followed the introduction of the virtual assistant referee (VAR) system. The sensor chip inside the Trionda sends razor-sharp ball-movement data to officials and hastens the process of making offside decisions.

— The sensor will be complemented by pitchside sensors, which track player movements. FIFA has also chosen to scan each footballer at the tournament, and VAR will also use a 3D digital avatar of the player.

— Combine all this information gathered — add AI to the mix — and FIFA and Adidas believe there lies a path to issuing lightning-fast offside calls and other VAR checks like accidental handballs and accurate player tracking.

— Many countries have found themselves on the losing end of a match based on a decision that went against them. World Cups have famously amplified those calls — be it Diego Maradona's handball against England in 1986 or Frank Lampard's ghost goal against Germany in 2010. FIFA is hoping to minimise such incidents.

— The 2026 FIFA World Cup will be the first time three countries will host the tournament. Keeping that in mind, the Trionda is made on a white base, with red, blue, and green-coloured graphics across the four panels of the ball.

Do You Know:

— The 2026 edition will take place across the vast expanse of the United States of America, Canada and Mexico. It will be a 39-day affair – a week longer than the longest FIFA World Cup ever and will have 40 matches more than the 2022 edition in Qatar.

— But if FIFA were to be asked, the biggest teams to miss out would be China and India. An unwritten goal of the 48-team World Cup was to welcome the two countries, and their combined populations of over three billion, into the fold – a pipe dream for now.

— A 48-team World Cup reduces the likelihood of a group stage where three teams of roughly similar strength are pooled together to create some jeopardy. This iteration of the World Cup, with its 12 groups, will see two of the best teams from each group progressing to the Round-of-32.

HOW RED MOVED THROUGH EMPIRES, TRADE NETWORKS, AND INDUSTRIAL FACTORIES

In 1799, during the storming of the fortress of Seringapatam, British troops broke through the defences of Srirangapatna and killed Tipu Sultan, the ruler of Mysore. The palace inventories compiled in the aftermath record jewels, weapons, manuscripts and textiles of startling colour. Officers wrote with particular fascination about the intensity of the dyed fabrics stored in the royal workshops.

At the same moment, the soldiers themselves wore uniforms dyed in equally vivid scarlet. The British redcoat marching through the palace and the Mysorean textile he admired were both products of a vast global system of dyes — insects raised in the Americas, plants cultivated in Asia, shellfish harvested along Mediterranean coasts.

Global red trade

In the Mediterranean world, the most famous red-purple dye was extracted from marine snails harvested along Levantine shores. Classical writers such as Pliny the Elder describe vats of crushed shells fermenting under the sun, releasing a colour so rare that Roman law eventually reserved it for imperial robes. The value of the dye lay not merely in its hue but in the difficulty of its production: thousands of mollusks sacrificed to colour a single garment. In the Americas, Indigenous farmers raised the cochineal insect on cactus paddles, harvesting the tiny bodies and drying them into a powder that produced a red of extraordinary intensity. A pound of red from these insects could produce enough red colour to run an entire factory. When Spanish ships began exporting cochineal to Europe in the sixteenth century, the dye rapidly became one of the most valuable commodities of the Atlantic world, rivaling silver in price and strategic importance.

Elsewhere, especially across Eurasia, dyers cultivated the roots of the madder plant, whose alizarin compounds could produce deep crimson lakes. These biological reds travelled astonishing distances. A single crimson cloak worn in London or Istanbul might contain colour drawn from insects cultivated in Oaxaca, plants grown in Central Asia, or mollusks harvested from Mediterranean shores. Colour, therefore, linked distant ecologies into networks of exchange long before industrial globalisation. Each red carried with it a geography.

Military power depended on these networks. By the eighteenth century, the scarlet coats of European regiments required reliable supplies of imported dyes. On battlefields clouded with gunpowder smoke, vivid uniforms helped commanders identify their troops and maintain order. The siege of Seringapatam unfolded within this global colour economy. Mysore's textile workshops produced fabrics dyed through Indian Ocean trade networks that connected Persian, Southeast Asian and South Asian markets. British officers entering the palace encountered not simply decorative cloth but the material traces of a rival commercial system. Empires fought not only for territory but also for control of the commodities that coloured the world.

Imperial cloth

Yet even as imperial armies marched in crimson, the foundations of the dye trade were beginning to shift. For centuries, every brilliant red had depended on living organisms, whether it was roots pulled from soil, or insects harvested from cacti, or shellfish gathered along rocky coasts. In 1856, the English chemist William Henry Perkin inadvertently altered this relationship. While attempting to synthesise quinine in an experiment, he produced a purple residue that dyed silk with remarkable intensity. The compound, later marketed as mauveine, inaugurated the modern synthetic dye industry. Within a few decades, chemists learned to reproduce the molecular structures responsible for many natural colours. In 1869, industrial chemists succeeded in synthesising alizarin, which is the key red component of madder, making centuries of agricultural cultivation suddenly unnecessary.

The implications were profound. Madder fields across Europe collapsed almost overnight. Cochineal plantations faced competition from cheaper laboratory pigments. What had once required soil, insects, seasons and skilled cultivation could now be produced in factories wherever coal, glassware and chemical knowledge were available.

Red was becoming abstract. Red moved from earth, to organism, to laboratory — from ritual substance to industrial commodity. And as pigments entered the circuits of factories, markets and empires, the meanings attached to red also began to shift: from sacrifice and sovereignty to revolution, warning, and mass politics.

Synthetic shift

The colour remained the same to the eye, but the world that produced it, and the world that would perceive red as a phenomenon, had both fundamentally changed.

UNAFFORDABLE HOMES: UN REPORT LISTS FACTORS BEHIND HOUSING CRISIS

Have you ever felt that you might not be able to afford to buy your own house? If yes, you are not alone. Across countries, housing prices are slipping out of the budget of most ordinary people. The world is in the midst of a housing crisis as more people move to urban areas and not enough houses are being built, according to the United Nations' recently released World Cities Report 2026: The Global Housing Crisis: Pathways to Action. The report also flags financialisation as one of the major factors behind this crisis.

Key Takeaways:

• Up to 3.4 billion people — four out of every 10 people worldwide — lack access to adequate housing. Of this, more than a billion live in informal settlements such as slums, according to the report by the United Nations Human Settlements Programme (UN-Habitat), the highest recorded number. It was released at the Thirteenth World Urban Forum, which was organised by UN-Habitat in Baku, Azerbaijan.

• At the same time, housing affordability pressures continue to intensify. If a household spends more than 30% of its budget on housing, it is considered housing stress-burdened. Globally, 44% of households spend more than 30% of their income on rent.

• For prospective buyers, affordability is measured using the house price-to-income ratio: housing is considered affordable when the median house price is no more than three times the median household income, while ratios above five indicate severe unaffordability.

• Central and Southern Asia, including India, have seen the sharpest relative rise in price-to-income ratios of any region — up 73% between 2010 (9.7) and 2023 (16.8).

• In 2018, more than half of the new housing units built in the eight largest Indian cities were in the affordable housing segment. This has declined to fewer than two out of every ten units built by 2025, the report notes. Developers prioritise luxury units due to higher margins and demand, placing homeownership out of reach for most families.

Do You Know:

• The roots of the crisis go back to the post-World War II period, the report notes. Facing severe housing shortages and economic depression, governments invested heavily in public housing. But international agencies, including the United Nations, International Labour Organization (ILO) and World Bank, rarely supported this model. Instead, they advocated greater private sector involvement, arguing that mass public housing was too costly, especially for newly independent and transitioning economies.

• This critique of public housing laid the foundations for two dominant approaches that continue to shape housing policy: "aided self-help" — where households build or improve homes with support — and the "enabling approach", under which governments facilitate construction by private players, community associations and others. Yet these programmes often failed to reach the poorest households and sometimes displaced the very populations they intended to support, the report states.

• The state has not only built fewer homes but has also often built them in the wrong locations. A detailed analysis of annual DDA reports by the Centre for Policy Research's Cities of Delhi project, directed by Partha Mukhopadhyay and Patrick Heller, found that the agency consistently fell behind housing targets and that construction skewed sharply toward higher income groups. "We calculate that of the 979,073 houses built between 2003 and 2010, fewer than 23,000 (2.3%) were built by the DDA," it said.

• The report also notes that housing must be developed where livelihoods and social infrastructure, such as parks, exist; otherwise, people are unwilling to relocate. More than 50,000 government-built flats remain unoccupied on Delhi's outskirts due to poor connectivity, lack of livelihoods and political tussles.

• According to the report, financialisation is one of the major drivers behind the crisis. It refers to the increasing involvement of financial actors, investment instruments and large pools of capital in housing and land markets. Mortgage lenders, private equity funds and corporate landlords have expanded their role in rental and ownership markets, often seeking long-term income and asset appreciation.

FEARSOME DINOSAUR-ERA REPTILE WAS T. REX OF THE SEA

Tyrannosaurus rex was a huge land predator during the twilight of the age of dinosaurs. But it was not the only T. rex that terrorised the Cretaceous Period. There also was a marine reptile named Tylosaurus rex — the T. rex of the sea — that rivalled its land counterpart in size and ferocity.

Scientists say they have identified Tylosaurus rex as a distinct species after a wide-ranging examination of previously discovered fossils. They made the judgment based on its enormous size, fine serrations along the edges of its teeth to cut flesh more efficiently, heavy-duty musculature of the jaws and neck for subduing large prey, and certain other anatomical nuances. Roughly 66 million years ago, Tyrannosaurus rex roamed the land in Western North America. Approximately 80 million years ago, Tylosaurus rex prowled an inland sea that at the time split North America in two. The seagoing T. rex had a streamlined body, elongated snout with large teeth, four large paddle-like flippers, and a powerful tail. The genus 'Tylosaurus' has been known since fossils were first unearthed during the 19th century. A handful of species are recognised, including Tylosaurus proriger. A genus is a grouping of closely related species sharing similar characteristics. For example, lions and tigers are from the same genus but represent different species.

The largest Tyrannosaurus rex specimen, nicknamed Sue and held at the Field Museum in Chicago, is about 12.2 m long. The largest Tylosaurus rex specimen, nicknamed Bunker and held at the University of Kansas Biodiversity Institute and Natural History Museum, is about 13.2 m long. Bunker previously had been identified as Tylosaurus proriger, but possessed the suite of traits that assigned it to Tylosaurus rex, the researchers said. "The skull alone is as long as I am tall — 5-foot-7 inches (1.7 m)," said palaeontologist Amelia Zietlow of the History Museum at the Castle in Appleton, Wisconsin, lead author of the study published in the Bulletin of the American Museum of Natural History.

Tylosaurus rex is a member of a group of marine reptiles with a global distribution called mosasaurs that evolved from land-living lizards to become apex marine predators during the final roughly 30 million years of the age of dinosaurs. Today's monitor lizards, including the Komodo dragon — the largest present-day lizard at up to 3 m long — are perhaps among the closest living relatives of Tylosaurus rex.

Most of the fossils identified as Tylosaurus rex come from north and central Texas, though Bunker came from Kansas. The holotype specimen — the fossil used to formally name a species — is at the Perot Museum.

The new species name, meaning "king of the tylosaurs," was a nod to Tyrannosaurus rex — "an incredible animal itself, obviously," Ms. Zietlow said. The two T. rexes were not contemporaries, though forerunners of the giant dinosaur lived at the same time as the giant mosasaur. Tylosaurus rex was among the largest of the mosasaurs, alongside the likes of Mosasaurus hoffmanni.

DUST STORM

Why it matters

Visuals of a massive dust storm in Churu on May 30 have been going viral on social media. The storm, which affected Churu, Hanumangarh, Sri Ganganagar, Bikaner, Nagaur, Didwana-Kuchaman, Alwar and Sikar, is common in parts of Rajasthan this time of the year. Let's understand this environmental phenomenon.

Core Concept:

— Dust storms primarily originating from the Thar Desert are not unusual over northern India in the pre-monsoon months of April to June. These storms are fuelled by intense heat and dry conditions, while south-westerly and westerly winds move the dust across the region.

— The India Meteorological Department's (IMD) Climate Hazards and Vulnerability Atlas of India, based on 1981-2010 climatological normals, shows that parts of northwest India fall in the highest dust-storm frequency class, averaging 0.89 to 1.55 dust-storm days.

— According to IMD, dust storms are common meteorological hazards in arid and semiarid regions. It is usually caused by thunderstorms or strong pressure gradients associated with cyclones which increase wind speed over a wide area.

— These strong winds lift large amounts of sand and dust from bare, dry soils into the atmosphere, transporting them hundreds to thousands of kilometers away.

— According to National Disaster Management Authority's Guidelines for Preparation of Action plan – Prevention and Management of Thunderstorm & Lightning/ Squall/Dust/Hailstorm and Strong Winds, dust storm is of three types:

1) Slight dust storm: If the wind speed is up to 41 kmph and visibility is less than 1,000 metres but more than 500 meters.
2) Moderate dust storm: If the wind speed is between 42-74 kmph and visibility is between 200 and 500 metres.
3) Severe dust storm: If the surface wind speed (in gusts) exceeds 74 kmph and visibility is less than 200 metres.

— A squall is defined as a sudden increase of wind speed of at least 29 kmph (16 knots) with the speed rising to 40 kmph (22 knots) or more and lasting for at least one minute. It is of two types:

1) Moderate squall: If the surface wind speed (in gusts) is up to 74 kmph.
2) Severe squall: If the surface wind speed (in gusts) is greater than 74 kmph.

— The frequency and intensity of squall are maximum over eastern and northeastern States. Also, its frequency is maximum during the pre-monsoon season with an increasing trend from March to May in different parts of the country. However, there is a secondary maximum in the winter season over northwest India.

THE GENIE OF SYNTHETIC BIOLOGY IS OUT, AND WITH IT COMES POWER AND PERIL

For the first time in about four billion years of life on the earth, one species is learning not just to read the book of life but to write new versions.

Humans' quest to understand and explain the natural world has always carried a double consequence: every success also enhances our ability to change the world. By understanding how diseases act, we create drugs and vaccines that change the prevalence of infectious agents. The elimination of smallpox is one example. Understanding the basis of some hereditary disorders has meant that dietary management can help those affected to live full lives. Phenylketonuria, a condition in which the body cannot process a common amino acid, phenylalanine, is one such example.

Verbosity in genes

At the core of our efforts to understand and explain the extraordinary diversity of forms and functions of life lies one molecule: deoxyribonucleic acid, popularly known by its abbreviation, DNA. DNA resides in cells, the unit of construction of our bodies — indeed of any organism — and we humans are made up of trillions of cells.

The DNA in a cell is called its genome. The linear thread of DNA that makes up the genome has an alphabet of four molecules, denoted by the letters 'A', 'T', 'G', and 'C'. A genome can have thousands of genes, and through the specific ordering of these letters, each gene can encode a specific protein. Proteins in their various forms make up, or help manufacture, all that is needed for each cell to perform its unique function.

If we were to look simultaneously at a bacterium, a fruit fly, a mouse, and a human, and think about their varying complexity, we would be tempted to hypothesise that the human has many thousands of times more genes than the fly or the bacterium. After all, we are a far more complex organism than a tiny, unicellular bacterium.

However, the commonly studied bacterium Escherichia coli has about 4,300 genes. The fruit fly, about 17,000. The mouse, about 21,000. And the human, about 22,000. There is only a fivefold difference in gene number between a bacterium and a human. The mouse has more protein-coding genes than us, and a water flea, Daphnia, has about 31,000 genes, more than either us or the mouse.

Verbosity in genes, as in conversation, is not a measure of complexity. Just as one can convey something complex and information-dense in a short, non-redundant paragraph, it is how, when, how much, and where in the cell gene products are expressed that determines complexity. While genes encode proteins, they also have DNA sequences involved in regulating when, where, and to what extent genes are expressed. These regulatory regions are locations where other specific proteins, called transcription factors bind, to turn genes 'on' and 'off'. These regulatory proteins are themselves encoded by genes.

Three extraordinary insights

The decreasing cost and increasing speed of DNA sequencing means that we can, today, sequence the genome of any organism we choose. At the start of the Human Genome Project, sequencing a human genome took more than a decade, cost close to $3 billion, and involved thousands of scientists across about 20 countries. Today this is possible in a few hours, at a cost of a few hundred dollars, in a small laboratory.

A LIVER PROTEIN TRIGGERED BY EXERCISE REVERSED MEMORY LOSS IN MICE

As we grow older, our cognitive abilities begin to wane. We forget names and places, lose trains of thought, and become creatures of habit. A key to overcoming these ageing-induced cognitive deficits may be exercise.

"Exercise improves cardiovascular fitness, glucose metabolism, insulin sensitivity, blood pressure, lipid profiles, sleep, mood, and immune function.

"While all of these can influence brain health, exercise also affects the brain more directly by many different processes, including changes in signalling molecules."

A new study published in Cell has reported how a signal released by the liver after exercise reduces cognitive decline due to ageing and Alzheimer's disease in mice.

Exerkines to the rescue

After exercise, small molecules called exerkines are released by the liver, skeletal muscles, heart, and brain into the bloodstream. These include peptides, lipids, hormones, and nucleic acids. These exerkines mediate the beneficial effects of exercise, including promoting cardiovascular fitness and improving metabolism, throughout the body.

In the study, Gregor Bieri and colleagues at the University of California, San Francisco, examined the mechanism of action of one such exerkine produced by the liver: GPLD1.

The researchers increased the levels of GPLD1 in the livers of older mice that had exercised — voluntarily running on wheels, like a treadmill. Old mice that could not exercise because their wheels had been locked had lower levels of GPLD1 in their livers.

Next, the researchers tested the cognitive abilities of young and old mice. Young mice performed better at a spatial memory test compared to old mice. The test was to find a platform hidden in a pool of water. Young mice made fewer errors and found the platform sooner compared to their older peers. The young mice also preferred novel objects instead of familiar ones and would readily explore novel locations, while old mice showed no such preferences.

Importantly, these cognitive deficits were reduced in old mice whose livers were injected with GPLD1, showing that GPLD1 could mitigate ageing-induced cognitive decline.

Protective barrier

GPLD1 is an enzyme that breaks down hundreds of proteins on cell surfaces. Based on this function, the authors focused on the blood-brain barrier in mice – a network of blood vessels and specialised cells that surround the brain.

“The blood-brain barrier tightly regulates the signals and nutrients that get shuttled between the brain and blood,” Dr. Bieri, the lead author of the study, explained.

As we age, the barrier accumulates proteins that make it leaky. The authors found one such protein, called TNAP, to be highly enriched in the blood-brain barriers of old mice, notably even around the hippocampus, the learning and memory centre of the brain.

“While we do not fully understand its role, we observed that TNAP drives inflammation and impairs the transport of factors from blood to brain,” Dr. Bieri said.

He and his colleagues performed three experiments to tie the roles of TNAP and GPLD1. First, the scientists found that old mice that have more TNAP in their barriers also had leaky blood vessels. Next, young mice in which TNAP levels were artificially increased in the barrier surrounding the hippocampus showed leaky blood vessels and cognitive defects similar to old mice. Third, injecting GPLD1 in the livers of old mice, while also artificially increasing TNAP in the blood-brain barrier, nullified the beneficial effects of GPLD1 on cognitive function.

“A strength of this study is the combination of approaches that provides mechanistic evidence that TNAP is functionally involved in blood-brain barrier dysfunction and cognitive decline,” Dr. Tari said.

Overall, these experiments showed that TNAP, which accumulates on the blood-brain barrier due to ageing, is broken down by GPLD1, an enzyme released by the liver after exercise.

Therapeutic potential for Alzheimer's

Given that ageing is a risk factor for neurodegenerative disorders like Alzheimer's disease and dementia, the authors next tested whether the GPLD1 intervention could reduce cognitive decline in a mouse model of Alzheimer's disease.

Dr. Tari, who was not involved in the study, exercised caution on this count, noting that "mouse models of Alzheimer's do not fully reproduce the complexity of the disease in humans, which develops over decades and involves vascular dysfunction, inflammation, metabolism, genetics, and lifestyle factors."

"When the blood-brain barrier becomes leaky, several things can happen that are relevant to Alzheimer's development," Dr. Tari said. "First, inflammatory molecules and other blood-derived factors can enter the brain more easily and activate immune responses. This causes chronic inflammation in the nerve cells which can accelerate disease processes."

"Secondly, if the blood-brain barrier function is impaired, the brain may become less efficient at clearing toxic proteins and maintaining its internal environment." Alzheimer's disease is characterised by the accumulation of toxic amyloid protein, which clump together to form plaques, leading to neurodegeneration and cognitive decline. These features are modelled in genetically modified mice by expressing human genes with multiple mutations that force the rapid buildup of amyloid protein.

The team allowed the Alzheimer's-modelled mice to run on wheels voluntarily for three months, after which their GPLD1 levels were higher, and their cognitive performance was notably improved, compared to Alzheimer's-modelled mice that did not exercise.

In another experiment, GPLD1 was injected into the livers of Alzheimer's-modelled mice. In these mice, TNAP levels in the blood-brain barrier were lower, the blood vessels were less leaky, there were fewer amyloid plaques, and cognitive dysfunction was reduced.

Experts said these results are encouraging and have clinical implications for Alzheimer's disease.

Parallel and convergent pathways

Exercise affects different parts of the body simultaneously. Brain function is also influenced by multiple factors. Recently, in another study, researchers from Seoul National University and the Korea Brain Research Institute found that exerkines secreted by skeletal muscles could improve cognitive performance by crossing the blood-brain barrier, unlike GPLD1. This exerkine was found to boost new neuron formation within the hippocampus. "The benefits of exercise are unlikely to be explained by a single molecule or pathway alone," Dr. Tari noted, adding that "the strength of exercise likely lies in its ability to trigger a coordinated, whole-body response."

Dr. Bieri said he sees clinical opportunity in the possibility of multiple exerkines working in tandem: "As potential new therapeutic strategies keep expanding, [the] discovery of complementary mechanisms will allow for a more personalised medicine approach. Future treatments will likely be combinatorial, tackling different cell types and hallmarks of ageing and disease."

HOW NEW PANCREATIC CANCER PILL DOUBLES SURVIVAL RATE?

A new experimental pill is offering hope for patients of pancreatic cancer, one of the deadliest and hardest-to-treat forms of the disease.

Key Takeaways:

• Results from a large international trial presented at the American Society of Clinical Oncology (ASCO) annual meeting showed that daraxonrasib, a once-daily oral drug, nearly doubled survival time in patients with advanced pancreatic cancer whose disease had progressed despite earlier treatment.

• "For years, the average (median) survival for patients with advanced pancreatic cancers has hovered around one year. It was six months in the late 1990s and just about 9-12 months three decades later. Improvements in survival have been minimally incremental despite active research over the last two decades," says Professor Anant Ramaswamy, specialist in GI cancers and Geriatric Oncology, Tata Memorial Centre, Mumbai.

• "In such a scenario, the impact of an oral pill improving or rather, doubling survival in pre-treated patients with pancreatic cancer is great news. Also, this is just the beginning for this new class of drugs. Patients and oncologists can expect more improvements in the times to come," he told The Indian Express.

Do You Know:

• The drug works by targeting KRAS, a cancer-driving gene mutation found in the vast majority of pancreatic tumours and one that researchers have spent decades trying to effectively shut down. The findings have generated excitement among oncologists because progress in treating pancreatic cancer has historically been slow.

• RAS is a protein that is ubiquitously expressed in almost all cell types in the human body. It is encoded for by a gene called RAS gene. Mutations (damaging alterations in the gene which cause cancer) in the RAS gene family (of which KRAS is the most common) affect approximately 20% of all cancers. Approximately 80% of pancreatic cancers have alterations in the KRAS gene, which has made it a major area of research in pancreatic cancers.

• Basically, when the KRAS gene is mutated, it becomes continually active or 'ON' mode by binding to some small molecules in the cells and then ensures that there is disruption of activity in normal cells. That's how these cells become dysregulated and cancerous. Daraxonrasib inhibits this state from inside the cell and suppresses pathways that are involved in perpetuating cancer cell growth. It is the first drug of its class that has shown such successful results, though many drugs with similar activity are in the pipeline and should emerge in a few years.

UNDERSTANDING SPF NUMBER ON SUNSCREEN LOTION AND HOW IT IS MEASURED

Sun Protection Factor, or SPF, is designed to measure protection against ultraviolet B (UVB) radiation, the part of sunlight primarily responsible for sunburns. But it does not tell the whole story about sun protection, nor does a higher SPF automatically mean better protection. Understanding what SPF measures, and what it does not, can help in making more informed decisions about skin protection.

In standard testing, sunscreen is applied to the skin and researchers compare how much ultraviolet exposure is needed to produce redness, or erythema, on protected skin versus unprotected skin, says Katheeja Nasika, consultant dermatologist, Rela Hospital, Chennai. “If an SPF is 30, theoretically the amount of UV exposure needed to cause minimal erythema on sunscreen-applied skin would be 30 times higher than on unprotected skin,” she explains.

Narayanan A., consultant dermatologist at SRM Prime Hospital, Chennai, points out however that “the testing is conducted under controlled conditions using a specified amount of sunscreen. In real life, most people apply far less sunscreen than is used during laboratory testing, meaning actual protection may be lower than the SPF listed on the label.”

What do SPF numbers mean?

One of the most common misconceptions is that SPF values increase protection in a straight line. According to K.R. Sharmatha, senior consultant dermatologist, SIMS Hospital, Chennai, SPF 30 blocks about 95-97% of UVB radiation, SPF 50 blocks roughly 97-98%, and SPF 80 blocks close to 99%. The difference is one roughly one percentage point, with protection gains becoming progressively smaller at higher SPF values

While higher SPF provides somewhat greater protection, the difference between SPF 30 and SPF 50 is far smaller than most people imagine.

A sunscreen’s SPF value only measures protection against UVB radiation. Pushpa Gnanaraj, senior consultant dermatologist, Apollo Speciality Hospitals, Vanagaram, Chennai, notes that UVA penetrates more deeply. UVA radiation is strongly linked to pigmentation, photoageing, wrinkles and loss of skin elasticity. For this reason, experts emphasise that SPF alone should not determine sunscreen choice. They recommend choosing a broad-spectrum sunscreen with PA+++ protection, which indicates protection against UVA rays as well as products that provide protection against both UVA and UVB radiation rather than focusing solely on the SPF number.

Experts also say that SPF 30 provides adequate protection for most people when applied correctly. “Anything above SPF 30 is okay for Indian skin,” says Dr. Nasika. She recommends SPF 30 as a minimum, while SPF 50 or higher for outdoor sports, extended sun exposure, or individuals with photosensitive skin conditions.

Application matters

Many tend to overlook correct application. Experts recommend applying sunscreen 15 to 20 minutes before sun exposure and ensuring that exposed areas such as the face, neck, hands and forearms are covered. Reapplication is essential every two to three hours during outdoor exposure, especially after washing the face or if the product is not water-resistant. And for people working outdoors, and in sports, experts recommend waterproof formulations. High-SPF sunscreens also require regular reapplication because sunscreen do not block 100% of UV radiation. A properly applied SPF 30 sunscreen may offer better protection than an SPF 100 product applied inadequately.

The difference between the benefits that SPF 30 and SPF 50 offer is small. The more important factors are choosing a broad-spectrum product, applying it correctly, and reapplying it regularly. This summer, stay safe under the sun. Understanding SPF is less about finding the highest number and more about using sunscreen effectively and consistently.