



# CURRENT AFFAIRS FOR UPSC

13th to 19th April 2025



## INTERNATIONAL

### AN ATOMIC TUG OF WAR

The U.S. and Iran have started talks about the latter's controversial nuclear programme. After Donald Trump, in his first term, unilaterally withdrew the U.S. from the 2015 nuclear deal, officially known as the Joint Comprehensive Plan of Action (JCPOA), Iran had maintained that it would not hold direct talks with the U.S. There were multiple rounds of indirect talks in Vienna after Joe Biden became President in 2021, but those efforts were inconclusive. Iran, in this period, substantially accelerated its nuclear programme.

In recent months, Iran came under increasing pressure — its so-called axis of resistance has been humbled by Israel, it lost an ally in Syria, and its economy is in serious trouble. As the heat on Iran rose, Mr. Trump offered dialogue. "We can't let Iran have a nuclear bomb," he said last week in a joint press conference at the White House with the visiting Israeli Prime Minister, Benjamin Netanyahu. Faced with the threat of war in a moment of weakness, Iran has agreed to engage the Americans diplomatically.

Iran, a signatory of the Nuclear Non-Proliferation Treaty (NPT), ceased to cooperate with the International Atomic Energy Agency (IAEA) after the 1979 revolution. Ever since, the Islamic Republic faced allegations that it has been pursuing a clandestine nuclear programme. In 2022, the IAEA launched an investigation into Iran's alleged nuclear activities. In November 2011, the agency reported that Iran appeared to have worked on designing an atom bomb. Iran has always maintained that its nuclear programme was for peaceful purposes. But its critics pointed to its stockpile of highly enriched uranium as evidence of the country's clandestine designs.

Iran's uranium enrichment story, however, is a long, complex one.

In natural settings, U-235, the uranium isotope that can sustain nuclear fission chain reactions, makes up around 0.7% of uranium. The rest is U-238. Before its use in nuclear settings, uranium is enriched to increase the concentration of U-235. Both low-enriched uranium (LEU) and high-assay low-enriched uranium (HALEU) are enriched up to 20% for use in different kinds of nuclear reactors. Highly enriched uranium (HEU) refers to enrichment beyond 20%. Weapons-grade uranium is typically 90% or more.

Centrifuges are the world's enrichment technology of choice. These containers spin their contents at several thousand revolutions per minute. Because U-238 is slightly denser than U-235, the centrifugal force pushes it more towards the periphery. The feed is uranium hexafluoride (UF<sub>6</sub>) gas. Enrichment facilities have hundreds or thousands of centrifuges operating in cascades, with each cascade accepting as its feed the output of the previous cascade. At each step, more-enriched UF<sub>6</sub> is passed to the next while the rest, called tails, is recycled or processed for long-term storage. Each centrifuge's enrichment service is measured in separative work units (SWUs). Depending on the centrifuge design, producing 1 kg of weapons-grade uranium from natural uranium may need around 250 SWUs.

In 2006, Iran enriched uranium to about 3.5% using 164 IR-1 centrifuges, each of which delivers around 0.8 SWU/year. In 2010, the IAEA confirmed that Iran had enriched uranium to 19.75% at the Natanz Fuel Enrichment Plant and in 2012 at the Fordow plant. By 2013, the country had a stockpile of about 7.6 tonnes of 3.5% LEU and 0.2 tonnes of 19.75% LEU gas.



### Terms of the original deal

The 2015 Iran nuclear deal (JCPOA), between Tehran, the five permanent members of the UN Security Council, and the European Union, provided a short-lived solution to the nuclear crisis. The deal promised to remove international sanctions on Iran in return for the country removing most of its centrifuges, limiting enrichment to 3.67%, and capping its LEU stockpile at 300 kg, among other measures. Iran was fully compliant with the terms when Mr. Trump pulled the U.S. out of it in May 2018 and reimposed sanctions on Tehran. Iran has since accelerated its nuclear programme breaching the agreement, which saw the country enriching uranium to 60% at its plants.

This is crucial. If 126 SWUs are required to enrich uranium from 0.7% such that it yields 1 kg of 60% HEU plus 0.3% tails, only 2.2 SWUs are required to enrich 60% HEU to 1 kg of 90% weapons-grade level plus 20% tails (which is higher at higher enrichment). In other words, 60% HEU will have completed more than 90% of the work required to produce weapons-grade uranium. According to some estimates, Iran has around 70 kg of 60% HEU, sufficient for five to eight nuclear warheads.

While the number of SWUs decreases with more enrichment, the energy cost skyrockets. But Iran's commitment suggests the centrifuges will not want for power.

Iran Watch has estimated that all centrifuges "presently installed in production mode" in Iran could produce 168-269 kg of 60% high-enriched uranium in "up to two weeks" (assuming 1% tails and 54% feed enrichment). The time to produce enough U-235 for one warhead may thus have dropped from around a year during the JCPOA to a few weeks today.

The IAEA suggests a "significant quantity" of 25 kg per warhead with a blast yield of 20 kilotonnes (to compare, Hiroshima was devastated by a yield of 13-16 kilotonnes). Newer designs could have the same yield with lighter cores. Iran may also assemble more weapons of lower yield.

Iran's centrifuges also raise questions about how quickly it can assemble a bomb. Post-enrichment, engineers must convert the uranium in UF<sub>6</sub> to metallic form and machine it into the bomb's core. Second, they need to develop explosives, detonators, arming and firing systems, neutron initiators, explosive lenses, and launch and re-entry vehicles. And they need to conduct tests. The second set can be done in parallel with enrichment, however. According to data from the IAEA and the U.S. Office of the Director of National Intelligence, among others, Iran ran a programme in 1999-2003 during which it also focused on these activities.

### Ramifications of talks failure

Harvard University Belfer Center for Science and International Affairs scholar Hui Zhang has written that if Iran's steps towards its first nuclear weapon are like China's in 1964, Iran will need "probably less than three weeks" between gaseous weapons-grade uranium and a bomb.

Thus, Iran may be able to develop a deployable warhead in a matter of months if it decides to do so.

As of now there is no evidence to suggest Iran has made that decision. But Iran's growing stockpile of HEU and shrinking breakout time — the time taken to convert weapons-grade fuel into a bomb — have already set alarm bells ringing in Israel. Tel Aviv has made it clear that it will not hesitate to bomb Iran's nuclear facilities. Mr. Trump has also threatened Iran with military action. But before that, he wants to try the path of diplomacy. If the talks collapse, there would be bombing,



he threatened. "If it requires military, we're going to have military. Israel will obviously be very much involved in that — it'll be the leader of that."

#### SELF-INFLICTED WOUND

President Donald Trump's threat to revoke the tax-exempt status of Harvard University as an educational institution will have far-reaching consequences not only for the wider student community but also for corporate America and the military-industrial complex. The administration also indicated that it would block the admission of foreign students, who make up nearly a third of Harvard's student body. The university has refused to accept intrusive federal government control over its activities based on the premise that the government is providing hefty grants. The ostensible reason for the Trump administration's move is the so-called "leftwing, antisemitic" protests against the Gaza War that broke out at Harvard and Columbia, which have the image of being left-liberal. The Trump administration seems to be playing to its 'Make America Great Again' (MAGA) base which has nursed historical grievances against northeastern elites and their universities, exemplified in the Ivy Leagues. These institutions are indeed elite in terms of academic standards but Harvard admits students from a socio-economic spectrum through generous scholarships. The Trump administration opposes Diversity, Equity and Inclusion principles ideologically and Harvard could also have been targeted for this reason. But Harvard has deep pockets and has heft in the corridors of power to outlast Mr. Trump.

Mr. Trump's slashing of government research funds has also affected several public universities, including in deep-red States such as Alabama. Public universities, barring a few such as in Michigan, Texas, and California that have built a sizeable endowment, depend on state support and are under increasing political control. America's government-induced crisis in higher education threatens a key edifice of American strength and power. It strikes at a long-standing belief in that nation, which is borne out by data, that getting a college degree is a surer path towards prosperity. Mr. Trump, formerly a Democrat, is only part of a long-term global megatrend in politics. The big picture is that America is only a late entrant in defunding public higher education. The U.K., under Margaret Thatcher, was an early starter. India joined the stream long ago with the NDA government only deepening the cutbacks. Australia, Singapore, Germany and the Scandinavian countries are holding out among the developed nations. It is no coincidence that China's ascent has paralleled continued public funding of higher education. Much like the U.S. universities of the past, Chinese higher education institutions are building a knowledge base on other nations and regions. Future generations of Americans will see this as a self-inflicted wound.

#### MUSEUMS RETHINK HOW THE HOLOCAUST SHOULD BE SHOWN

Historians are rethinking the way the Holocaust is being presented in museums as the world marks the 80th anniversary of the liberation of the last Nazi concentration camps this month.

Shocking images of the mass killings of Jews were "used massively at the end of Second World War to show the violence of the Nazis," historian Tal Bruttman, a specialist on the Holocaust, said. But in doing so "we kind of lost sight of the fact that is not normal to show" such graphic scenes of mass murder, of people being humiliated and dehumanised, he said.

Up to this year, visitors to the Memorial de Caen war museum in France were plunged into darkened rooms with photographs showing the horror of what happened in the camps.



“The previous generation of Holocaust museums used these images because it reinforces the horror,” said James Bulgin, who is in charge of the Holocaust galleries at London’s Imperial War Museum. The difficulty with that is that it “denies the people within the images any capacity for agency or respect or identity,” he added. “The other problem with Holocaust narratives is that they tend to relate the history of what the Nazis and their collaborators did, not what Jewish people experienced,” argued the British historian.

Some six million were murdered in the Nazi’s attempt to wipe out European Jews.

Which is why “there are no photographs of killings” in the new, “almost clinically white” galleries.

However, graphic images of the genocide are shown in smaller formats, often on panels that carry a warning and that you have to turn over to see.

### SELF-PERPETUATING

In April 2023, a power struggle between two generals pushed Sudan, which witnessed a revolution and a counter-revolutionary coup in the preceding years, into a devastating cycle of violence. The conflict has displaced nearly 13 million people, transformed cities, including the capital, Khartoum, into war zones, and triggered economic collapse, inducing the world’s first officially declared famine in four years. More than 1,50,000 people have lost their lives. Yet, the generals, army chief Abdel Fattah al-Burhan, and head of the notorious paramilitary Rapid Support Forces (RSF) Mohamed Hamdan Dagalo, are not done fighting. Although the army suffered setbacks early in the conflict, it has regained ground. Late last month, in a blow to the RSF, Gen. Burhan’s forces took control of Khartoum. The military controls much of northern and eastern Sudan, including the Red Sea city of Port Sudan, the de facto wartime capital. However, the RSF, a potent force, maintains control over much of the western Darfur region, where it is currently laying siege to El Fasher, an army stronghold. Recently, the RSF declared a parallel government in the areas under its control, seeking to shore up political support. So, despite the army’s gains, a decisive victory seems far away.

While the RSF faces credible allegations of large-scale atrocities against civilians, including the rape of children, both sides bear responsibility for Sudan’s descent into chaos and anarchy. The country hoped for a new dawn when mass protests brought down the brutal three-decade dictatorship of President Omar al-Bashir in 2019. After his fall, the military and civilian leaders shared power in a transitional administration, which was seen as a stepping stone toward full civilian rule. But in 2021, Gen. Burhan, then head of the transitional government, refused to hand over power to the civilian leadership. He joined hands with Mr. Dagalo, to orchestrate a coup. Their alliance soon collapsed, bringing civil war. For two years, the international community largely turned a blind eye, while regional powers supported rival factions. The military accuses the UAE of backing the predominantly Arab RSF, while the army gets support from Russia, Türkiye, Iran and Qatar. But two years of war is a testament to the fact that there can be no military solution. Civilians have endured relentless air strikes by the army, indiscriminate attacks and looting by the RSF and a near-total collapse in health care, education and access to food and water in the war-hit areas. The world must pay attention to Sudan’s humanitarian crisis and push for urgent, meaningful talks between the warring factions. What Sudan needs is an immediate ceasefire, followed by humanitarian aid so that at least some measure of stability could be restored.





## NATIONAL

### INDIA SURE CONTENDER FOR SEAT IN EXPANDED UNSC: IGN CHAIR

If a decision is made on expanding the UN Security Council, “then surely” India will be a contender, Chair of Intergovernmental Negotiations on UNSC reforms said on Thursday.

— “The goal of this reformed Council must be representative. Obviously, India is a main player on the world stage today. But it (UN) is a membership of 193 countries. The consideration is representative for everybody and the whole membership of the United Nations,” Ambassador Tareq AlBanai said at a press briefing here.

— AlBanai, who is Kuwait’s Permanent Representative to the UN, recalled that last year he and co-Chair Ambassador Alexander Marschik of Austria had visited India and had a conversation there “at the highest level” on the issue of UNSC reform.

— Earlier this week, India’s Permanent Representative to the UN Ambassador, P Harish, in a statement on behalf of the G4 nations of Brazil, Germany, Japan, and India, told an IGN meeting that the existing UN architecture is from a different era, one that no longer exists and the current geopolitical realities warrant a review of this architecture.

#### Do You Know:

— India, a founding member of the United Nations, has been an active contributor to United Nations peacekeeping missions since their inception. As the world’s largest democracy and an emerging global power, India advocates strongly for United Nations Security Council reforms, seeking a permanent seat to ensure greater inclusivity in global governance.

— Currently, the powerful UN organ consists of five permanent members – China, France, Russia, the UK and the US. The remaining 10 members are elected to sit at the horse-shoe table for two-year terms as non-permanent members. India had last sat in the Council as a non-permanent member in 2021-22.

— The Uniting for Consensus (UfC) Group, comprising Argentina, Canada, Colombia, Costa Rica, Malta, Mexico, Pakistan, the Republic of Korea, San Marino, Spain, Turkiye and Italy, reiterated its position of increasing the number of Security Council seats exclusively in the non-permanent category.

— UfC proposes a 27-member Security Council, without any increase in the number of permanent members, which currently stands at five.

### BELGIUM CONFIRMS MEHUL CHOKSI’S ARREST, REQUEST FOR EXTRADITION BY INDIA

The Belgium government on Monday confirmed that fugitive jeweller Mehul Choksi (65) has been arrested in Antwerp following an extradition request by Indian investigation agencies.

- Wanted for his alleged involvement in the Rs 13,000-crore Punjab National Bank (PNB) loan fraud case, Choksi fled India in January 2018.
- “The Belgian Federal Public Service of Justice can confirm that Mr Mehul Choksi was arrested on Saturday, April 12, 2025. He is being detained in anticipation of further judicial proceedings.



Access to his legal counsel has been assured,” a spokesperson of the Belgian Ministry of Justice told The Indian Express.

- India and Belgium have a long-standing extradition treaty. “Following his detention on Saturday, a team of three to four senior officials of CBI have been asked to travel to Belgium to complete all the procedures and documentation work,” said sources.

- Choksi, his nephew and fugitive diamond merchant Nirav Modi, and their family members were among those booked by the Central Bureau of Investigation (CBI) and Enforcement Directorate (ED) in 2018 for perpetrating the alleged loan fraud at PNB’s Brady House branch in Mumbai.

- Nirav Modi, declared a fugitive economic offender, has been lodged in a London jail since he was held by the authorities there in 2019 on the basis of a legal request made by the ED and the CBI. He is contesting extradition to India.

- Both the CBI and ED have filed multiple chargesheets and prosecution complaints against Choksi and Nirav Modi.

#### **Do You Know:**

- India first signed an extradition treaty with Belgium in 1901. The treaty allows extradition on the basis of “dual criminality”, including for financial crimes. Dual criminality essentially means that an individual can be extradited only if her offence is punishable in both jurisdictions involved.

- The treaty, however, prohibits extradition for offences of political nature or in cases where the individual in question can prove she is being prosecuted in the requesting country for political reasons. It also says that the fugitive arrested shall be released if the requesting country fails to present evidence of culpability within two months.

- In 2020, India and Belgium signed the Mutual Legal Assistance Treaty for better cooperation on fugitives.

- Choksi was arrested in Belgium on the requests of the Central Bureau of Investigation (CBI) and the Enforcement Directorate (ED), which are probing the case against Choksi. Once the extradition process begins, teams from both agencies will visit Belgium, and prepare a case in accordance with the country’s laws.

- However, it is unlikely that Choksi will be back in India any time soon, if at all. While extraditions are typically lengthy legal processes, this is especially true in Europe.

- Choksi’s arrest in Belgium showcases India’s diplomatic heft, but whether it can also fast track the legal process remains to be seen. India’s experience with the UK, for the extradition of Choksi’s nephew and co-accused Nirav Modi and former Kingfisher Airlines owner Vijay Mallya, has not been encouraging. Mallya left India in 2016, while Modi fled to the UK in 2018.

#### **EXTRADITIONS TOUGH TILL CONDITIONS IMPROVE IN PRISONS: JUSTICE LOKUR**

Even as India seeks the return of fugitive diamond businessman Mehul Choksi, accused of fraud to the tune of ₹13,578 crore in the Punjab National Bank case, former Supreme Court Justice Madan B. Lokur warned on Tuesday that such extraditions will be difficult until conditions are improved in Indian prisons. Justice Lokur chairs the United Nations Internal Justice Council.



He was speaking at the release of the India Justice Report, 2025, an initiative started by the Tata Trusts and supported by several civil society organisations and data partners. They collectively track the performance of States across four areas: police, judiciary, prisons and legal aid.

Justice Lokur cited the recent judgment of a U.K. court that denied the extradition of Sanjay Bhandari, a defence consultant wanted on charges of tax evasion and money laundering, citing the unsafe conditions inside the Tihar Jail in Delhi.

Justice Lokur, who said that he had read the appellate court order, added that the extradition was refused on the ground of torture and the conditions of jails in India. He also claimed that the U.K. court had asked the Indian government for assurances about the conditions in jail four times, but was only given a wishy-washy reply.

"U.K. court had mentioned the matter of Christian Michel, who is in a jail for many years. Recently, Michel was granted bail and he said he doesn't want it. Why? If I get bail, there will be certain conditions that will be put on me. Instead, my total imprisonment, even if found guilty, will be over in about four to five months... So, I prefer to be in jail for five to six months rather than subject myself to conditions of the bail. This is one case mentioned by them," Justice Lokur said.

Michel is an alleged middleman in the Agustawestland case and has been in Tihar jail since 2018.

Justice Lokur said that the U.K. court had also noted the case of Jagtar Johal, who died in an Indian jail, along with the case of Tillu Tajpuria, who too was murdered in Tihar.

#### **IJR findings**

Meanwhile, the IJR 2025 listed serious loopholes in the Indian judiciary, police, prisons and legal aides. The report stated just one civil police official is available for 831 people in India and that not a single State or Union Territory meets its own reserved quotas for women in police force.

It added that about 17% of police stations in the country do not have a single CCTV, while three in 10 police stations do not have women help desks.

The IJR reveals that there are fewer than 1,000 women in senior positions among the 20.3 lakh police personnel. Uttar Pradesh has the most overcrowded prisons. Also, 91% of Delhi's prison population consisted of under-trials.

### **DOES TAHAWWUR RANA HAVE LINKS WITH PAKISTAN?**

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

Sixteen years after David Coleman Headley (Daood Gilani) and Tahawwur Hussain Rana were arrested by the U.S. Federal Bureau of Investigation, and the National Investigation Agency (NIA) filed an FIR and a charge-sheet against them, Rana has been extradited to India. His extradition marks a major win for Indian investigators, lawyers and diplomats. Rana will now be in NIA custody and face trial in India. This will be the third in-person trial in India of terrorists, after Ajmal Kasab and Zabiuddin Ansari alias Abu Jundal, involved in November 26, 2008 terror attacks.

#### **What is the evidence against Rana?**

The case against Rana was laid out by U.S. investigators prosecuting him for the Mumbai attacks, planning the Copenhagen attack and for links to the Lashkar-e-Taiba (LeT); he was convicted in





the last two cases in 2011. He had appealed against the extradition order to India, but the U.S. Supreme Court finally rejected it last week. The evidence against him is based on three things: First, Rana's actions in terms of funding and housing Headley, and helping him get Indian visas and tickets until 2009 as well as building a fake identity for him as a representative of Rana's travel and immigration agency. In November 2008, days before the attacks, Rana and his wife travelled to Mumbai and other Indian cities. Second, Headley's testimony, as part of the plea bargain against Rana, clearly states that Rana knew about the 26/11 conspiracy from 2006, and helped Headley carry out his reconnaissance operation willingly, and celebrated the attacks. Rana has denied this, and was eventually acquitted in the U.S. case. Third, are the FBI intercepts of Rana's conversations with Headley, including one particular meeting Rana had with a "co-conspirator" in Dubai in September 2008, when he was told the attacks were imminent.

#### **What is the Pakistan angle?**

After Rana was extradited, Pakistan's Foreign Office attempted to distance itself from him, holding that he had taken up Canadian citizenship in 1997, and hadn't tried to renew his papers since. Rana was born in Pakistan's Punjab province and attended a military school in Hasan Abdal, where he first met Headley. He joined the Pakistani army as a doctor and rose to the rank of colonel before he inexplicably left for Canada, claiming he had a medical condition. The Pakistani army declared him a deserter and Rana claimed Headley had told him he would use his connections to clear Rana's records, which was why he agreed to help him. In his testimony, Headley says that Rana stayed in touch with LeT handlers throughout the planning of the operations. The question remains whether during the trial in India, Rana can point to a more direct link between Pakistan and the 26/11 conspiracy.

#### **What about the trial in Pakistan?**

After initially pursuing the evidence and promising India cooperation in the 26/11 case, Pakistan's government has virtually dropped it, even as the trail led closer to LeT commanders including Hafiz Saeed, and possibly to LeT's handlers in Pakistan's intelligence agencies. However, between 2009 and 2013, Pakistan's Federal Investigation Agency managed to collect crucial evidence about the case, listed by then Director General Tariq Khosa in an article in Pakistan's Dawn newspaper. It proved Kasab had been trained in LeT camps in Thatta, Sindh, and the boat used by the terrorists was traced to a shop in Karachi where an LeT operative paid for it. More significantly, the operations room in Karachi from where LeT commanders gave direct orders to the terrorists was raided. The findings were shared with India for the Kasab trial. However, when India sought to match the voice recordings from the ops room to those in custody like Hafiz Saeed and Zaki-ur-Rehman Lakhvi, Pakistan stopped cooperating.

#### **Has the U.S. withheld anything from India?**

Questions linger over how much U.S. authorities knew about the planning, given that they had shared a number of intelligence alerts about terror strikes on Mumbai hotels prior to November 2008. According to Indian officials, Headley was a "double agent", an informant of the U.S. Drugs Enforcement Agency (DEA), and carrying out an LeT plot, and that the intelligence came from him or through FBI intercepts. It is certainly curious that even though the FBI was tracking Headley's calls and movement, they didn't alert Indian authorities when he returned to India after the attacks in early 2009, to plan more attacks. He was arrested when he prepared to leave for Denmark in September 2009 to carry out attacks there.



## INDIA, ITALY AGREE TO TAKE FORWARD IMEEC INITIATIVE

India and Italy have decided to expand cooperation in areas of trade, defence, clean energy and high technology while agreeing to work jointly in implementing the ambitious India-Middle-East-Europe-Economic Corridor (IMEEC).

- Ways to deepen India-Italy cooperation under the framework of Joint Strategic Action Plan (JSAP) 2025-29 figured prominently during talks between External Affairs Minister S Jaishankar and Italian Deputy Prime Minister Antonio Tajani Friday evening.

- Tajani, also the Minister of Foreign Affairs and International Cooperation, is on a two-day visit to India from Friday. During the delegation-level talks, Jaishankar and Tajani reviewed the growing bilateral cooperation under the ambit of JSAP, which included the areas of trade and investment, defence and security, space, science and technology, clean energy transition and people-to-people ties, the Ministry of External Affairs (MEA) said Saturday.

- It said the two ministers noted the vast potential of India-Italy cooperation in areas of AI, cyber, telecom, digital technologies, renewable energy, biofuels, education and mobility of youth and professionals, among others.

- The JSAP was announced by PM Narendra Modi and Italian PM Giorgia Meloni following their last November meeting at Rio de Janeiro. Jaishankar and Tajani reiterated their commitment to elevating the bilateral strategic partnership and ensuring concrete outcomes from the JSAP, the MEA said in a statement.

- It added that the visit and engagements of Tajani were instrumental in taking forward the strategic partnership and diversifying bilateral cooperation across domains as per the JSAP.

- Jaishankar and Tajani renewed their commitment to take forward the strategic initiative IMEEC, according to the MEA. In this context, the Jaishankar welcomed Italy's appointment of a special envoy for IMEEC.

### Do You Know:

- India and Italy are ancient civilisations with links going back 2,000 years. Italian port cities were important trading posts on the spice route. The Venetian merchant Marco Polo traveled to India in the 13th century and wrote about his experiences.

- In the last century, Nobel Laureate Rabindranath Tagore visited Italy in May-June 1926, a visit arranged by Carlo Formichi, a Professor of Sanskrit at the University of Rome.

- Mahatma Gandhi visited Rome in December 1931 on his way back from the Round Table Conference in London. Leaders of the Indian freedom struggle read the works of the Italian revolutionary Mazzini.

- Indian troops, serving with the British Indian Army, were deployed in Italy during World War II, fighting against the Germans and Mussolini's forces.

- After Independence, political relations between India and Italy were established in 1947. Since then, there has been a regular exchange of visits at political and official levels between both countries, including several visits by Heads of States.



## PM MODI HEADS TO SAUDI NEXT WEEK: TRADE, ENERGY AND DEFENCE TIES ON THE TABLE

Prime Minister Narendra Modi is headed to Saudi Arabia next week — his first visit to the country in his third term. Since first assuming office in 2014, Modi has travelled there twice before — in 2016 and 2019.

— Sources said that trade and investments, energy cooperation, reviving the IMEEC (India-Middle East-Europe Corridor) and defence partnership will be among the issues on the agenda for discussion when Modi visits the country on April 22-23.

— Modi is expected to meet Crown Prince Mohammed bin Salman in Jeddah. His visit comes ahead of US President Donald Trump's expected visit to Saudi Arabia in mid-May — Trump's first foreign trip in his second term at the White House.

— The tension in the West Asian region has impacted the ambitious IMEEC in the last couple of years, ever since the October 7, 2023, terror attacks by Hamas on Israel led to the war in Gaza. New Delhi would want to take stock of the current situation, and move forward on the IMEEC — that will connect India with Europe, through the Middle East.

— Saudi Arabia is a key partner in this endeavour and India wants to move on this swiftly, after high-level visits by the UAE's royalty, Israel's minister and Italy's deputy prime minister among others.

— Modi visited Riyadh again in October 2019, during which the Strategic Partnership Council Agreement was signed, establishing a high-level council to steer India-Saudi ties. Prince Mohammed bin Salman then visited India in September 2023 to participate in the G20 Leaders' Summit and to co-chair the First Leaders' Meeting of the India-Saudi Arabia Strategic Partnership Council along with Modi.

— Ties with Saudi Arabia are important for energy security — it was India's third largest crude and petroleum products sourcing destination in 2023-24. India imported 33.35 MMT of crude oil from Saudi Arabia in 2023-24, accounting for 14.3% of the country's total crude oil imports. Saudi Arabia was the third largest LPG sourcing destination for India in this period, accounting for 18.2% of India's total LPG imports. Delhi will want to engage with Saudi for better deals, as they discuss India's high energy needs.

— Indian investments in Saudi Arabia have also increased in recent years, reaching a cumulative figure of approximately US\$ 3 billion in August 2023. Saudi investment in India has been about US\$ 10 billion. Efforts will be made to enhance these investments as well.

### Do You Know:

— The India-Middle East-Europe Economic Corridor (IMEC) is a connectivity project that seeks to develop a seamless infrastructure of ports, railways, roads, sea lines and pipelines to enhance trade among India, the Arabian Peninsula, the Mediterranean region and Europe.

— The IMEC aims to capitalise on the existing trade routes between India and the Arab Gulf and the Eastern Mediterranean and Europe and build the missing infrastructure to link the Gulf and Mediterranean regions.



— The project is an outcome of the growing diplomatic and political convergence between India, the Arab Gulf monarchies, Israel, the United States (US) and the European Union (EU) with a common understanding for the need to enhance sea and land connectivity towards greater economic exchanges among these regions.

#### KAILASH MANSAROVAR YATRA TO RESUME SOON: EVERYTHING YOU NEED TO KNOW

The Ministry of External Affairs (MEA) on Thursday announced that the Kailash Mansarovar Yatra, which has not taken place since 2020, will resume this year. This comes as a part of a larger rapprochement between India and China in recent months.

— While the yatra had initially been suspended due to the Covid-19 pandemic, deteriorating relations between India and China meant that it did not resume even after the virus was no longer a concern.

— Since 2024, however, both countries have been looking to improve ties. They signed a pact last October to disengage at Demchok and Depsang, the two remaining friction points on the border.

— The resumption of the yatra was formally discussed for the first time at the Special Representatives meet in Beijing between National Security Advisor Ajit Doval and China Foreign Minister Wang Yi in December.

— Lake Mansarovar, known locally as Mapam Yumtso, is a high altitude freshwater lake near Mount Kailash in the Ngari Prefecture of the Tibet Autonomous Region (TAR).

— Both the lake, which is at an elevation of 4,600 metres, and the adjacent 6,638-metre high mountain, which Hindus believe is the home to Lord Shiva, are sacred in Hinduism, Buddhism, Jainism, and the Tibetan Bon religion.

— Hundreds of pilgrims make the arduous journey to the region each year; they generally trek to Lake Mansarovar, and then circumambulate the nearby Mount Kailash.

#### Do You Know:

— There are two primary routes to reach Lake Mansarovar from India.

— **LIPULEKH PASS ROUTE:** Lipulekh pass lies at an altitude of 5,115 metres, on the border between Uttarakhand and TAR, near the trijunction with Nepal. It is an ancient passageway between the Indian subcontinent and the Tibetan Plateau, frequented by traders and pilgrims alike.

— While the Lipulekh pass route is the most direct way to get to Mansarovar from India — as the crow flies, the lake is roughly 50 km from the border — the terrain makes the journey very challenging. Currently, this route entails roughly 200 km of hard trekking. Before 2020, it had been operational since 1981.

— **NATHU LA PASS ROUTE:** Nathu La pass lies at an altitude of 4,310 metres on the border between Sikkim and TAR. It is one of two mountain passes in the region — the other being Jelep La — that have connected Sikkim and Tibet since ancient times.

— The route to Mansarovar from Nathu La is much longer in terms of distance — close to 1,500 km. But it is fully motorable, meaning pilgrims can make it all the way to the lake without any





trekking. (They would only need to trek 35-40 km for the circumambulation of Mount Kailash). This route became operational in 2015.

— NEPAL ROUTE: No private operators function on the two official routes. There is, however, a third route through Nepal in which private companies do operate. In theory, this route has been accessible to Indians since 2023, when China reopened its border with Nepal. But visa and permit requirements, as well as high costs due to China-imposed fees, have meant that few have likely availed this option.

#### JUSTICE GAVAI SET TO BE NEXT CHIEF JUSTICE OF INDIA

Chief Justice of India Sanjiv Khanna Wednesday wrote to the Union Law Ministry, naming Justice B R Gavai, the second-most senior judge of the Supreme Court, as his successor. Once approved by the government, Justice Gavai will become the 52nd Chief Justice of India.

- Elevated as a judge of the Supreme Court on May 24, 2019, Justice Gavai, 64, will take over as CJI after the retirement of the current CJI Khanna, and remain in office till November 23, 2025. Justice Khanna will retire on May 13, 2025. The retirement age of Supreme Court judges is 65 years.
- Hailing from Amravati in Maharashtra, Justice Gavai joined the Bar on March 16, 1985, and worked with Raja S Bhonsale, former Advocate General and judge of the Bombay High Court, till 1987.
- After 1990, he practised mainly before the Nagpur Bench of the Bombay High Court in Constitutional and Administrative Law. He was also Standing Counsel for Municipal Corporation of Nagpur, Amravati Municipal Corporation, and Amravati University.
- Justice Gavai was appointed as Assistant Government Pleader and Additional Public Prosecutor in the Nagpur Bench of the Bombay High Court from August 1992 to July 1993, and as Government Pleader and Public Prosecutor from January 17, 2000.
- He was elevated as Additional Judge of the Bombay High Court on November 14, 2003, and became a permanent Judge of the High Court on November 12, 2005. As a judge of the Supreme Court, Justice Gavai has been a part of several landmark rulings. He was part of the SC majority verdict of January 2023, which upheld the Centre's 2016 decision to demonetise currency notes of Rs 500 and Rs 1,000.

#### Do You Know:

- The Chief Justice of India and the other judges of the Supreme Court are appointed by the President under clause (2) of Article 124 of the Indian Constitution. It is mentioned in Article 124 that appointment by the President is to be done "after consultation" with judges of the Supreme Court, as the President may "deem necessary". Article 217, which deals with the appointment of High Court judges, says the President should consult the CJI, Governor, and Chief Justice of the High Court concerned. Further, the tenure of a CJI is until they attain the age of 65 years, while High Court judges retire at 62 years.
- Apart from being an Indian citizen, the person must (a) have been for at least five years a Judge of a High Court or of two or more such Courts in succession or (b) have been for at least ten years an advocate of a High Court or of two or more such Courts in succession, or (c) be, in the opinion of the President, a distinguished jurist.





- The constitution states: “A Judge of the Supreme Court shall not be removed from his office except by an order of the President passed after an address by each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of the members of that House present and voting”, with the address in the same session presented to the President for removal on one of the two grounds – proved misbehaviour or incapacity.

## THE BOY WHO STOOD HIS GROUND: HOW KEDAR NATH’S ACTS OF DEFIANCE SHAPED SEDITION LAW

One day in 1927, on his way back from school, Kedar Nath saw a few villagers dismantling a rail track to disrupt the movement of British-run trains. He joined in and was subsequently arrested. Later, his brother-in-law, a policeman, is said to have urged him to deny his involvement but the defiant teenager stood his ground.

— Kedar Nath would show this determination once again in his 40s — after he was charged with sedition for a fiery speech against the then Congress government in Bihar’s Munger in 1953.

— According to court records, Kedar Nath’s speech went thus, “Today the dogs of the CID are loitering round Barauni... Today these Congress goondas are sitting on the gaddi due to the mistake of the people. When we drove out the Britishers, we shall strike and turn out these Congress goondas as well...”

— A magistrate’s court in Monghyr (Munger) charged and convicted Nath of sedition under Section 124A of the erstwhile Indian Penal Code (IPC). The charge was upheld by the Patna High Court, which sentenced him to a rigorous imprisonment of one year.

— Kedar Nath then moved the Supreme Court, challenging the constitutional validity of Section 124A, a colonial law that was enacted to curb the freedom movement. The provision criminalises speech that “attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government.”

— On January 20, 1962, a five-judge Bench of the Supreme Court upheld the sedition provision, but restricted its application “to acts involving intention or tendency to create disorder, or disturbance of law and order, or incitement to violence”.

### Do You Know:

— In 2022, while hearing the challenge, the Supreme Court had stayed the operation of the sedition law, holding that it was prima facie unconstitutional. However, the government had requested an opportunity to rethink the law before the court could strike it down.

— In 2023, when the Bharatiya Nyaya Sanhita was introduced to repeal the IPC, Union Home Minister Amit Shah had announced in Parliament that the colonial sedition law had been repealed. However, the BNS retains the text of the law, with a mere name change from “rajdroh (treason against the empire)” to “deshdroh (treason against the nation)”.

## A RESTORATION OF SANITY TO THE CONSTITUTIONAL SYSTEM

The judgment of the Supreme Court of India, on April 8, 2025, namely, *The State Of Tamil Nadu vs The Governor of Tamil Nadu and Anr.*, can be called a landmark one as it has brought greater



clarity to the constitutional provision dealing with the giving of assent to a Bill by a Governor. In this case, the background to the case is about the Governor of Tamil Nadu, R.N. Ravi, who had kept with him 10 Bills without taking any decision on them for many years. Finally, when the Assembly passed the Bills again and sent them to him, the Governor, instead of giving his assent, as per the mandate of Article 200 of the Constitution, sent them to the President of India for consideration. He sent the Bills to the President only after the Government of Tamil Nadu approached the top court.

The Bench of the Court (Justice J.B. Pardiwala and Justice R. Mahadevan) has now held that the action of the Governor in sending the Bills to the President at that stage to be unconstitutional and has struck it down. The Court also struck down the action taken by the President on those Bills — she had withheld assent. Invoking its special power under Article 142, the Court declared that all those Bills rejected by the President shall be deemed to have been assented to.

It is perhaps the first time in the history of the Court that Bills passed by the legislature of a state and withheld by the President have been declared as assented to by the Court. It is an extraordinary remedy to an extraordinary situation created by an extraordinary action of a State Governor.

In fact, Tamil Nadu is not the only State where the Governor has sat on Bills passed by the legislature. It has happened in Kerala, Telangana and Punjab. Kerala has now approached the Court on the same issue, which is yet to be heard.

#### **The Bill does not die**

Article 200 lays down the course of action to be followed by the Governor when a Bill duly passed by the legislature is presented to him. The logical course the Governor should follow is to give assent to the Bill. But if he does not follow this and decides to withhold assent to the Bill, the said Article says that he may declare that he is withholding assent. It would thus appear that once the Governor withholds assent, the Bill will die a natural death. The wording of this Article would convey such a meaning. But this part of the Article was very cogently explained by the Court in *State Of Punjab vs Principal Secretary to The Governor of Punjab and Another* (2023). The Court made it unambiguously clear that a declaration by the Governor that he is withholding assent does not bring an end to the Bill. It held that withholding of the Bill should be followed by sending the Bill to the legislature for reconsideration as soon as possible.

When the Bill is thus sent to the legislature, it would reconsider it promptly and send it back to the Governor either in the form in which it was passed originally or with amendments suggested by the Governor. Either way, the Governor will have to give assent to the Bill. He cannot exercise any veto against it. The Court has explained this point in the following words: “if the governor decides to withhold assent under the substantive part of Article 200 the logical course of action is to pursue the course indicated in the first proviso of remitting the Bill to the state legislature for reconsideration ... if the first proviso is not read in juxtaposition to the power to withhold assent conferred by the substantive part of Article 200 the governor as the unelected head of the state would be in a position to virtually veto the functioning of a duly elected legislature by simple declaring that assent is withheld without any further recourse”.

This judicial explanation has been carried forward by the Court in the Tamil Nadu case. The Court has reiterated this position, namely, withholding assent is not the end of the story so far as the Bill is concerned but the Governor is mandated to send the Bill back to the legislature for its



reconsideration and the Governor shall give assent to the Bill which is sent to him after reconsideration.

#### **The Court's 'time limit' and legality**

Three crucial points have been decided by the Court which make this judgment truly historic. The first relates to the time limit fixed within which the Governor as well as the President of India should decide the issue of assent. The minimum period is one month and the maximum, three months. If the Governor or the President does not adhere to this time limit, the aggrieved State can seek the intervention of the constitutional court. Obviously, the Court went to the extent of fixing a time limit in this case because of the fact that the Governor sat on the Bills for years without taking any decision. The Court has said that the Governor does not have the power to exercise a pocket veto or an absolute veto while exercising his power under Article 200.

Following the judgment, questions have been raised on the legality of a time limit under Article 200. The Court has clarified it in the judgment — it has stated that it is guided by the inherent expedient nature of the procedure prescribed under Article 200 and the well-settled legal principle that where no time limit for the exercise of a power is prescribed, it should be exercised within a reasonable period. The Court has viewed the deliberate inaction on the part of the Governor in assenting to the Bills or reserving them for the consideration of the President as a serious threat to the federal polity.

The second point relates to the question of discretion of the Governor in withholding assent or reserving the Bill for the consideration of the President.

The Court has taken the position that the Governor can take either action only on the advice of the Council of Ministers. The judgment says that when the Governor withholds assent, he has to send the Bill to the legislature for reconsideration and when the Assembly sends the Bill back to the Governor with or without the amendments suggested by him, the Governor has to give assent.

But there is a problem with this proposition. For example, what is the occasion when the government has to advise the Governor to withhold assent and send the Bill to the Assembly for reconsideration? When the legislature can send back the Bill after reconsideration without accepting any of the amendments suggested by the Governor, how can it be then said that the Council of Ministers have advised the Governor to propose amendments to the legislature when the government commands a majority there? In fact, on the question of discretion, the Court has not been consistent as different Benches have given different opinions thereon.

#### **Constitutional heads and judicial review**

The third, and most crucial, point is about judicial review of the decision of the Governor and the President. The basic proposition laid down by the Court after reviewing a catena of cases is that "no exercise of power under the constitution is beyond the pale of judicial review". So, it has held that there is no reason to exclude the discharge of functions by the Governor or the President under Articles 200 and 201, respectively, from judicial review.

The judgment has been assailed by the Kerala Governor who has said that this is a case of judicial overreach and that it is the job of Parliament, and not the Court, to amend the Constitution. While it is true that Parliament alone has the right to amend the Constitution, it is the job of the judiciary to explain and interpret the constitutional provisions. Another issue that has been raised by a section of lawyers is that the issues decided by Justice Pardiwala's Bench can be decided only by



a Constitution Bench under Article 145(3). In fact, the Constitution Bench under Article 145(3) decides substantial questions of law as to the interpretation of the Constitution.

Closer scrutiny would reveal that none of these points comes under the category of substantial question of law within the meaning of that Article. As a matter of fact, the Court has only brought out the inherent meaning and amplified the dimensions of it in Articles 200 and 201 with the objective of preventing the subversion of the constitutional order. By doing so, the Court has restored sanity to the constitutional system which had come under severe strain due to plain arbitrariness and deliberate inaction on the part of constitutional authorities.

Decades ago, India had seen the unedifying spectacle of a President sitting on the postal Bill for years, with a helpless Union government unable to do anything. This underscores the need to make suitable changes in the relevant provisions of the Constitution relating to the issue of assent to Bills, whether they are passed by Parliament or a State legislature. The cue must be from this judgment. Therein lies the importance of this judgment.

#### WHAT HAS THE SC RULED ON THE T.N. GOVERNOR?

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

On April 8, the Supreme Court declared Tamil Nadu Governor R.N. Ravi's prolonged refusal to give his assent to 10 Bills as illegal and erroneous in law. In a landmark verdict, Justices J.B. Pardiwala and R. Mahadevan underscored the importance of cooperative federalism, amid growing concerns over the increasing politicisation of the Governor's office in Opposition-ruled States.

##### **What is the process of granting assent?**

Article 200 of the Constitution delineates the powers conferred upon a Governor when a Bill, having been passed by the State legislature, is presented for assent. The only exception is Money Bills, which are deemed to have automatically received assent. In all other cases, once a Bill has been passed by both Houses of the legislature, the Governor can exercise one of three options: grant assent, withhold assent and return the Bill to the Assembly for reconsideration, or reserve it for the President's consideration. However, only those Bills that undermine the High Court's powers to the extent of endangering its constitutionally mandated role can be reserved for Presidential consideration.

The first proviso to Article 200 stipulates that if the Governor decides to withhold assent, the Bill must be returned to the Assembly "as soon as possible", accompanied by a request to reconsider the proposed legislation or suggest amendments. However, if the Assembly, upon such reconsideration, passes the Bill with or without the amendments, the Governor is constitutionally obliged to grant assent.

##### **Can the Governor exercise a 'pocket veto'?**

The ongoing impasse between the Governors and Opposition-ruled State governments primarily hinges on the interpretation of this proviso. While it mandates prompt action, it stops short of prescribing a definitive timeline. This constitutional silence has often been exploited by Governors to indefinitely delay action on a Bill without formally returning it — a tactic colloquially known as the "pocket veto."





However, the judges pointed out that the use of the term “shall” in the substantive portion of Article 200, when read in conjunction with the phrase “as soon as possible” in its proviso, precludes the possibility of any such pocket veto. Justice Pardiwala, who authored the judgment, clarified that the Governor’s option to “withhold assent” cannot be equated with an unqualified power to reject or veto legislation duly enacted by the State legislature. He cautioned that such an interpretation would undermine the very foundation of a representative democracy.

#### **When about President’s consideration?**

Further limiting the discretionary powers of the Governor, the court ruled that a Bill cannot be reserved for the President’s consideration once it has been returned to the State legislature, reconsidered and resubmitted for assent. The only exception is if the Bill, in its second iteration, is materially different from the original version. The judgment also clarified that such reservation cannot be based on “personal dissatisfaction” or “political expediency” and is only permissible in instances where there is a grave threat to democratic principles.

Notably, the judges have set a three-month deadline for the President to decide whether to assent to Bills referred by the Governor. The clock will begin ticking from the day the reference is received. “Any delay beyond this period must be accompanied by justifiable reasons and communicated to the concerned State,” the ruling states. A recommendation has also been made to the President to seek the Supreme Court’s advice on such Bills, in line with the procedure outlined in Article 143 of the Constitution, as a measure of prudence. The judges pointed out that this course of action is important, given the lack of a mechanism at the State level for the Governor to refer Bills to constitutional courts for their opinion.

#### **What are the timelines prescribed?**

The court has imposed similar timelines on the Governor to prevent any obstruction of the State’s legislative process. It clarified that when the Governor, acting on the Cabinet’s advice, opts to withhold assent or reserve a Bill for the President’s consideration, such action must be taken forthwith and no later than one month. If the Governor withholds assent contrary to ministerial advice, the Bill must be returned within three months, accompanied by a message detailing the rationale for the decision. Similarly, if the Governor reserves a Bill for the President against the Cabinet’s recommendation, this must also be done within three months. Finally, if the Bill is re-passed by the State legislature after reconsideration, the Governor is required to grant assent within one month. However, the ruling noted that any departure from these timelines may be condoned if there are “reasonable grounds”.

#### **Is judicial review permissible?**

The judges emphasised that any exercise of gubernatorial discretion must be amenable to judicial review to prevent any “disregard” for the will of the people, as expressed through their elected representatives. Invoking its inherent powers under Article 142 of the Constitution, the court deemed the 10 pending Bills to have received assent. Justice Pardiwala reasoned that the exercise of such extraordinary powers was warranted, given the Governor’s “scant respect” for prior rulings. He was particularly critical of the Governor’s decision to return the Bills without providing reasons, in clear violation of the court’s binding directive in *State of Punjab versus Principal Secretary to the Governor of Punjab* (2024).





### What are the potential implications?

P.D.T. Achary, former Secretary General of the Lok Sabha, told The Hindu that the ruling upholds the principles of federalism and provides Opposition-ruled State governments a clear constitutional remedy against inordinate delays by Governors in granting assent to Bills passed by the legislature. "The Supreme Court has been reigning in the discretionary powers of Governors for some time now. However, what sets this judgment apart is its articulation of definitive timelines for both the Governor and the President, ensuring that the enactment of crucial legislation is not indefinitely stalled," he said. Senior advocate Shadan Farsat noted that the top court has rarely invoked its inherent powers to create a legal fiction of deemed assent. "By recognising automatic assent in cases where the Governor fails to adhere to the prescribed timelines, the court has instituted a crucial safeguard against abuse of the office," he said. He added that the ruling could pave the way for similar judicial intervention in cases where the Union government delays acting on collegium recommendations. "Extending such powers to judicial appointments would help prevent an executive veto over the collegium's decisions," he told The Hindu.

### T.N. NOTIFIES 10 ACTS AFTER SC DEEMS ASSENT IMPLICIT

Legislative history was created in Tamil Nadu on Saturday, when the State government notified 10 Acts in the Government Gazette, making them the first Bills to become law without the assent of either the President or the Governor.

The development follows the Supreme Court's verdict that these Bills, readopted by the State Assembly and forwarded to the President by the Governor, were "deemed" to have received assent.

Responding to an X post on the topic, Chief Minister M.K. Stalin said: "DMK means creating history."

### Empowering varsities

Most of these Acts deal with the appointments of Vice-Chancellors in State-run universities, transferring powers previously vested with the Governor-Chancellor to the State government instead.

"History is made as these are the first Acts of any legislature in India to have taken effect without the signature of the Governor/President but on the strength of the judgement of the Supreme Court," DMK's MP in the Rajya Sabha P. Wilson said in a social media post, adding that, "Our universities will now be cleansed and taken to a new level under the chancellorship of the Government."

As per the notification, the Acts of the Tamil Nadu Legislative Assembly deemed to have received the assent of the Governor on November 18, 2023, include: The Tamil Nadu Fisheries University (Amendment) Act, 2020, which changes the University's name to The Tamil Nadu Dr. J. Jayalalithaa Fisheries University; The Tamil Nadu Universities Laws (Amendment) Act, 2022; The Tamil Nadu Dr. Ambedkar Law University (Amendment) Act, 2022; The Tamil Nadu Dr. M.G.R. Medical University, Chennai (Amendment) Act, 2022; The Tamil Nadu Agricultural University (Amendment) Act, 2022; The Tamil University (Second Amendment) Act, 2022; The Tamil Nadu Fisheries University (Amendment) Act, 2023; The Tamil Nadu Veterinary and Animal Sciences



University (Amendment) Act, 2023; and The Tamil Nadu Universities Laws (Second Amendment) Act, 2022.

“The Supreme Court verdict has brought what was outside judicial review, under judicial review, and introduced a provision of deemed approval in case of delay in assent for Bills. This verdict is applicable across India,” senior advocate N.L. Rajah explained.

However, he added that any future application of the principles laid down by the Supreme Court will depend on the factual matrix of the case to which it is sought to be applied, as the judgment of the top court arises from certain facts peculiar to this case. “Of course, it is a moot point whether a Constitutional issue could have been decided by a two-member Bench when the Constitution prescribes that it must be decided by a five-member Bench,” Mr. Rajah said.

Senior advocate Arvind P. Datar said that with the Supreme Court fixing a deadline of one to three months for Governors to take a call on any future Bills, it is expected that the Governors of all States will fall in line.

#### KERALA WILL SEEK TO HAVE PENDING BILLS DEEMED AS PASSED

Armed with the Supreme Court’s landmark judgment on Bills kept pending by the Governors and the President, Kerala is set to contend in the top court that all the Bills pending with the President be deemed as passed.

The Supreme Court last week deemed Bills kept pending by Tamil Nadu Governor R.N. Ravi to have received assent. Kerala will approach the Supreme Court next month seeking similar relief.

The Supreme Court had ruled that the prolonged refusal of Mr. Ravi to give assent to the Bills was “illegal” and “erroneous in law”.

Kerala had earlier approached the top court against similar acts of former Governor Arif Muhammad Khan. It had also moved the court against President Droupadi Murmu’s act of withholding assent to a few Bills.

Kerala will contend that the Bills pending with Ms. Murmu, including those for which she had withheld assent, be deemed as passed since the very act of the Governor sitting on them and later referring them to the President was “erroneous in law”. The State will also highlight the fact that the President had assigned no reasons for withholding consent for the Bills.

The SC, legal experts pointed out, had made it clear that the President would be required to assign clear and detailed reasons while withholding assent to a Bill.

#### A WELCOME MOVE

The Supreme Court, in quashing the Delhi High Court’s orders against Wikimedia to take down a Wikipedia page on the basis of a defamation case filed by the news agency, Asian News International (ANI), has set right an error by the High Court. A High Court judgment, passed on April 2, allowed the taking down of the Wikipedia page by saying that the statements were defamatory and were not a verbatim reproduction of the text in the references that it quoted; that the references were themselves “editorials” or “opinionated articles” and that being an encyclopaedia, Wikipedia carried a “higher responsibility”. The reasoning is problematic as the references are based on long form reporting and quotes from independent investigators, and are



not “opinions” or “editorials” as the High Court made them out to be. The Court has clearly differed with the High Court’s reasoning by observing that the takedown order was based on too wide a prayer, and noted that the directions to remove all false, misleading and defamatory content were too broadly worded. The Bench has now directed the news agency to make a fresh plea to the High Court pointing out specific portions to be removed from the webpage. The fact that Wikipedia is an Internet intermediary which enjoys safe harbour provisions as the content creation and moderation are handled by users of its site should suggest that any wide-ranging takedown order could punish the very model on which the encyclopaedia operates.

Wikipedia is a community-driven encyclopaedia freely available on the Internet and is maintained by volunteers across the world. Even if the quality of articles is not uniform, their editors generally include experts and Wikipedia allows users to edit the content provided they stick to site guidelines. Disputes on content leading to “editing wars” are generally resolved by discussions on the page and measures such as placing the page on “extended confirmed protection” or “full protection”, allowing only “extended confirmed users” for the former and administrators for the latter to make changes. These users are not selected by Wikimedia but elected by community members based on their prior editing activity and reputation. These processes have ensured a significant degree of reliability on the encyclopaedia, even as it has become a repository of more than 62.95 million articles in over 350 languages. In asking for the takedown of articles by interpreting critical information as defamation and by even threatening penal action against Wikipedia, judicial actions could unwittingly lead to the stifling of open discussion of entities on the encyclopaedia, thereby acting against the interest of the free flow of information.

#### TELANGANA’S SC SUB-QUOTAS: A NEW PHASE IN SOCIAL JUSTICE POLITICS

The implementation by the Telangana government of Scheduled Caste sub-categorisation — almost a year after the Supreme Court verdict that permitted states to subclassify SCs and STs for the purpose of reservation — is a welcome step towards deepening social justice. The Scheduled Castes (Rationalisation of Reservation) Act, 2025, which received the Governor’s assent on April 8 and was notified on April 14 — on Babasaheb Ambedkar’s birth anniversary — divides SCs into three categories, and distributes the prevailing SC reservation of 15 per cent among these groups. While Group I, consisting of 15 castes, will get 1 per cent of the share, Group II, comprising 18 castes, and Group III, consisting of 26 castes, will get a 9 and 5 per cent share, respectively.

Telangana’s move to implement a graded reservation — the first state in India to do so — for different castes within the SC communities underscores three important points. One, SCs/STs are not homogenous communities. Even during the early days of mobilisations of the most disprivileged castes — the word “Dalit” was yet to enter the vocabulary of resistance — the differences among sub-castes were a matter of concern. Ambedkar himself flagged it and, in a speech delivered at Karkam, Sholapur, on December 31, 1937, said, “We must completely abolish the ban on interdining and intermarriage among the Mahars (dominant caste) and Mangs (both categorised as SCs).”

Since Independence, within the SCs, the relatively dominant castes have disproportionately reaped the benefits of affirmative action. Government commission reports, like the Hukum Singh Commission in UP and the Sadashiva Commission in Karnataka, highlighted the reality of intra-caste discrimination among the Dalits. Rationalising the distribution of quotas has been one of the core demands of the non-dominant SCs. Two, 11 states in the country have already adopted the principle of sub-classification within OBCs, based on socio-economic parameters. Sub-classification for SCs is a similar acknowledgement of heterogeneity among Dalit communities.



Three, the history of the anti-caste movement in Telangana (erstwhile Andhra Pradesh) is laced with instances of non-dominant Dalits struggling for space in the larger Dalit movement. In 1994, the Madigas, a non-dominant Dalit caste, accused the dominant Malas of monopolising the benefits of reservation. Notably, Malas haven't welcomed the sub-categorisation move, whereas Madigas see it as a result of their three-decade-long struggle.

While implementation of sub-categorisation in reservation for the SCs would open up opportunities for the lowest rung of Dalits who are yet to receive the benefits of reservation, the question of deepening fissures within the Dalit communities cannot be overlooked. Amidst growing competition over limited resources, the Telangana government must work to fulfil the diverse needs of all Dalit communities. Otherwise, it will defeat the purpose of substantive equality that the policy of sub-categorisation aims to offer.

#### THE ANDHRA PRADESH SC SUB-QUOTAS, AND HOW THEY WILL WORK

The Andhra Pradesh Cabinet on Tuesday (April 15) approved the draft ordinance proposal made by the Social Welfare Department to implement sub-categorisation among Scheduled Castes in the state. Basically, this means that the state government wants to give 'reservation within reservation' to communities based on their backwardness.

— In the backdrop of the Supreme Court's verdict allowing states to sub-classify Scheduled Castes, the Telugu Desam Party-led NDA government in Andhra Pradesh on November 15, 2024 formed a commission to study SC sub-categorisation in the state.

— Leaders of SCs, and STs, and BCs say that it is important to provide reservations based on the numerical strength of the various sub-castes, rather than give a consolidated quota for all of them based on their overall population.

— The SC sub-caste of Madiga, which is further divided into several other sub-castes, claims that the other main SC sub-caste, the Mala community, corners all reservation benefits in the state.

— The Rajeev Ranjan Mishra Commission recommended dividing the SCs in Andhra Pradesh into 59 SC sub-groups classified into three different categories.

— Group 1 consists of the 'Most Backward', known as the Relli sub-group. Group 2 consists of 18 castes of the Madiga sub-group, and has been classified as 'backward', including the Arundhatiya, Bindala, Chamar, Chambhar... Group 3 comprises 29 castes of the Mala Group classified as 'less backward', including Adi Dravida, Anamuk, Arayamala...

— Group 1 – Most Backward (Relli sub-group) – 1.0% reservation

Group 2 – Backward (Madiga sub-groups) – 6.5% reservation

Group 3 – Relatively Less Backward (Mala sub-groups) – 7.5% reservation

— It is aimed at the integrated and equitable progress of various sub-castes in the state, ensuring their inclusion in education, government jobs, politics, and civil society representation.

#### Do You Know:

— Telangana became the first state in the country to implement the Scheduled Caste sub-categorisation, popularly called reservation within reservation.





— This comes after a seven-judge Constitution Bench in *Davinder Singh v State of Punjab* (August 2024) that allowed further sub-classification of SCs and STs to ensure the grant of quota to more backward castes inside these groups.

— The Seven-judges Bench, headed by then Chief Justice of India D Y Chandrachud in a 6:1 ruling, permitted states to create sub-classifications within the SC and ST categories for the purpose of according wider protections — through fixed sub-quotas — to the most backward communities within these categories

— This judgement overturns the apex court's 2004 decision in *E V Chinnaiah v State of Andhra Pradesh*, in which it had held that the SC/ST list is a "homogenous group" that cannot be divided further. The Court has stated that micro-classification of SCs was unconstitutional.

#### SUBMIT RESTORATION PLAN OR CHIEF SECY FACES 'SEVERE ACTION', SC TELLS TELANGANA

THE SUPREME Court Wednesday told the A Revanth Reddy government in Telangana that it will have to come up with a specific plan to restore the 100 acres of land abutting the University of Hyderabad, on which the state carried out tree felling, if it wanted its Chief Secretary "to be saved from severe action". The court said it would "go out of the way if needed" to protect the environment.

- Following protests over the felling of trees, the Supreme Court, taking suo motu cognizance, had on April 3 stopped the clearing of trees in the Kancha Gachibowli forested area near the university, and asked the Chief Secretary to explain the "compelling urgency" to remove the trees.
- On Wednesday, a bench of Justices B R Gavai and A G Masih said, "Under Article 142, we can do anything. For protection of environment and ecology, we will go out of the way if needed."
- Appearing for the state, Senior Advocate A M Singhvi said all activities had been stopped. He said there may have been some errors, but these were "bonafide and unintentional".
- Justice Gavai asked, "Do you have permission from the tree authority for felling the trees?" Singhvi replied, "Yes, except a small number of trees." Senior Advocate K Parameshwar, who is also amicus curiae in forest-related matters before the court, said the state government had adopted a self-certification mode and "self-declared that these species are exempt".
- Expressing surprise, Justice Gavai cited the court's 1996 order which said that "forest" has to be understood as per its dictionary meaning, and asked if the state authorities are above the court orders.
- The court directed the state wildlife warden to explain on the next date of hearing what is being done to protect the animals which became shelterless following the tree felling. The court will hear the matter next on May 15.

#### Do You Know:

- The global standard for "forest" is provided by the Food and Agriculture Organisation (FAO) of the United Nations: at least 1 hectare of land with a minimum of 10% per cent tree canopy cover. While the FAO does not include areas "predominantly under agriculture or urban land use" in a forest, India counts all 1-hectare plots with 10% canopy cover "irrespective of land use" as forest. The FSI is not the only one looking at India's forest cover. Over the years, several independent





studies have reported significant loss of forests in India. According to Global Forest Watch, a World Resources Institute platform, India lost 1,270 sq km of natural forest between 2010 and 2021.

- Kancha Gachibowli is one of Hyderabad's last remaining urban forests. It is rich in biodiversity, home to numerous bird, mammal and reptile species, and beautiful rock formations. Protests against the government's decision to auction the land off stem from the need to preserve existing carbon sinks in the city. Urban forests such as Kancha Gachibowli help regulate local climates by providing shade, reducing temperatures, and increasing humidity.
- For the government, the forest lies bang in the middle of Hyderabad's Financial District. Auctioning the land would not only fill government coffers, but also attract potential investments of Rs 50,000 crore, and generate as many as 5 lakh jobs, the government says. Notably, the Gachibowli IT corridor is one of the most expensive localities in Hyderabad, boasting extremely high property rates.
- Although the 400 acres in question were a part of the 2,300 acre parcel allotted to the UoH when it was established in 1974, legally, the state government is the sole owner of the entire land. Over the years, it has allocated pockets of land from this 2,300 acres for various purposes: constructing a bus depot, a telephone exchange, a IIIT campus, the Gachibowli sports stadium, a shooting range, etc.
- The disputed 400 acres were handed over by the then united Andhra Pradesh government to a private sports management firm in 2003, only to be reclaimed in 2006 due to non-use. This triggered a lengthy legal battle, which eventually saw the SC reiterate that the Telangana government was the sole owner of the land. But the 400 acres have never been demarcated. Nor has it been notified as a forest, even though it is a part of the UoH's larger forest ecosystem. This is at the heart of the current issue.
- Students and activists protesting against the Telangana government cite the SC's landmark verdict in T N Godavarman Thirumulpad v Union of India (1996). The apex court had held that any land with forest cover qualifies as "forest land", even if the land is not notified as a forest.
- On March 30, the government sent at least 50 earthmovers to the UoH campus to begin clear the forested land for auction. The east campus was barricaded to keep students out. This triggered massive protests in the campus. As many as 53 students were detained, and two others were arrested and remanded in judicial custody. Several students were injured. The Students' Union declared an indefinite strike even as the earthmovers continued with their work.

#### URDU IS AS INDIAN AS HINDI

At a time of deepening divides, the Supreme Court's observations on Urdu in Varshatai w/o Sanjay Bagade vs State Of Maharashtra on Tuesday come as a welcome affirmation of India's pluralistic ethos. Responding to a former councillor's petition challenging the use of Urdu on a municipal signboard in Maharashtra's Patur, the apex court observed, "The prejudice against Urdu stems from the misconception that Urdu is alien to India. This opinion, we are afraid, is incorrect as Urdu, like Marathi and Hindi, is an Indo-Aryan language. It is a language which was born in this land." The Court upheld the use of Urdu on the signboard.

The ruling not only underlines the constitutional right to linguistic diversity but also underscores Urdu's integral role in the nation's syncretic cultural and intellectual heritage. Increasingly viewed

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



through the narrow prism of an identity politics that considers Urdu to be an Islamic import, there have been push backs against Urdu in recent times. In February, this year, for instance, Urdu was a notable absence in the list of languages for translation of the Uttar Pradesh Legislative Assembly proceedings — UP has the sixth highest proportion of Urdu speakers in the country. In 2021, retail giant Fabindia had to withdraw an advertorial about a Diwali collection, after a backlash from right-wing Hindu groups, for naming it Jashn-e-Riwaaz. And yet, Urdu's journey had begun from the shared experiences and interactions of diverse communities in the subcontinent — through vibrant interactions with Persian, Arabic, Turkish, and the vernacular dialects of North India. It culminated in what the Court said was the “finest specimen of Ganga-Jamuni tehzeeb, or the Hindustani tehzeeb, which is the composite cultural ethos of the plains of northern and central India”, a language of refinement, grace, and cosmopolitanism, that gave voice to both delicate romanticism and fierce political consciousness, to poets and rebels.

The 2011 Census data on language, in fact, illuminated Urdu's deep-rooted connection with various regions and communities in the country. Contrary to the misconception that Urdu is predominantly spoken in the north, it showed the presence of significant Urdu-speaking populations in states like Maharashtra, Andhra Pradesh, Telangana, and Karnataka. The Census data pegged Urdu speakers in Maharashtra at 75.4 lakh; in Karnataka, the numbers stood at 66.18 lakh. At 10.83 per cent, Karnataka also has the highest proportion of Urdu speakers in the country. As the Court rightly pointed out, “Language is not religion. Language does not even represent religion. Language belongs to a community, to a region, to people... Language is culture.” Rather than viewing it as a dividing line, therefore, all languages, including Urdu, should be celebrated as a meeting ground, a woven tapestry of ideas, cultures and people.

#### HINDI AND URDU — A TALE OF TWINS

Recently, the Supreme Court has upheld the use of Urdu on the signboard of a municipal council building in Maharashtra in *Varshatai w/o Sanjay Bagade vs State Of Maharashtra* case. The court has said that language is culture and must not become a cause for dividing people, and Urdu “is the finest specimen of Ganga-Jamuni tehzeeb, or the Hindustani tehzeeb”.

— Peggy Mohan writes: In the Delhi region, a new language had already emerged; let us call it “Dehlavi”. It shared space in the larger region with other new languages, like Braj and Awadhi, but it had one immense advantage: Location. It was the vernacular language of the capital city.

— The new migrants, like all migrants throughout Indian history, preserved their “high” language, but abandoned their earlier vernacular. They kept Persian, but replaced Uzbek with Dehlavi for their daily conversations.

— Dehlavi was a spoken language, but soon people began to write in it, though serious literature continued to be in Persian and Sanskrit. It was written both in the Persian script and in local scripts like Kaithi and Mahajani.

— Centuries later, in Mughal times, during the reign of Aurangzeb, Jafar Zatalli, a poet from Narnaul, near Delhi, dreamed of writing for a larger audience. This was verse critical of the government, so it had to be in a language people understood: In “spoken Hindi”.

— Up till this moment, he had been composing ghazals only in Persian. So Persian became the fount he dipped into for the new words he needed, and these were almost all nouns. The basic operating system of spoken Hindi was unchanged.



— And in 1780, the poet Mus’hafi, writing in Lucknow, named this new language “Urdu”. Now that Urdu was a literary language, it began to drink in new nouns from Persian.

— It was the British who, uncomfortable with the Persian words in Urdu, and in the old legal system they were still using, decided in 1900 to “purge” Urdu of its Persian words and substitute vocabulary from the language they admired: Sanskrit.

#### **Do You Know:**

— The first Urdu newspaper, Jam-i-Jahan-Numa, was published on March 27, 1822. The weekly was launched by Harihar Dutta from Kolkata.

— The Urdu press, the voice of revolution during colonial rule, was instrumental in the promulgation of the Vernacular Press Act, 1877. It coined the war cry of the freedom struggle, “Inqilab Zindabad”, which is still the slogan of dissent.

— Maulvi Muhammad Baqir (1780-1857), a Urdu journalist, was the first to lay down his life for the nation. He started a Urdu newspaper, ‘Delhi Urdu Akhbar’, dedicated to the nationalist cause in the wake of the revolt of 1857. After the revolt broke out on 10 May 1857, Baqir renamed the paper as ‘Akhbar-us-Zafar’ (Paper of Zafar) to pay tribute to the leader of the revolt.

#### **ON WAQF ACT, SC’S NUDGE, CENTRE PAUSE**

The government has agreed to pause till May 5 two central aspects of the contentious amendments to the Waqf Act that was passed earlier this month. It told the Supreme Court that it would neither make appointments to Waqf Boards nor change the character of waqf properties, including “waqf-by-user”, notified and registered as such. The assurance came after a bench led by Chief Justice of India Sanjiv Khanna asked some hard questions of Solicitor General Tushar Mehta and indicated that it could stay the operation of some aspects of the law. The Centre’s pause — after the SC’s nudge — is welcome. It must lead to more deliberation on an issue that involves the constitutionally guaranteed fundamental rights of minorities. On May 5, the SC will hear the Centre again and decide whether it must protect the status quo till the law is fully tested in courts.

At a time of deepening divides, the relief provided by the protection of the status quo is crucial. It will ensure that there is no encroachment on rights that could render the possible outcome of the court finding an infirmity in the law into an academic exercise. The pause was also necessary because a key provision that does away with the concept of waqf-by-user — where land used for Muslim religious or charitable purposes for a long period of time is deemed as waqf even it was not registered as such — kicked in after the President gave her assent to the law on April 8. Opposition and minority voices have argued that striking down waqf-by-user could put a question mark over the status of at least half of all waqf properties. While the government cited misuse of this concept, which is valid in some cases, the fact also is that it has been part of law recognised by Indian courts going back to 1935. Even the SC’s landmark ruling in the 2019 Ayodhya case recognised the validity of waqf-by-user. On representation of non-Muslims in waqf boards, too, the SC has raised crucial questions. The bench asked if the government would “openly” say that it would also appoint minorities on temple boards. These are complex issues — involving faith, and also the space in a deliberative democracy for minority concerns to be heard and addressed.

The waqf law was introduced in August 2024 and was referred to a joint parliamentary committee that included members of the Opposition. It was debated in both Houses of the Parliament. On the face of it, this was a robust process. However, in the JPC, none of the issues raised by the



Opposition were taken on board — all the 14 amendments that were accepted were introduced by the BJP and its allies. In Parliament, it ultimately came down to the fact that the government had the hard numbers. Judicial review is an integral and inalienable part of the constitutional system of checks and balances. CJI Khanna has underlined that there are some good aspects of the law, even as the bench he presides over also asks the tough questions that will only add to the legislative process, not detract from it.

#### **Key issues in the challenge to the new Waqf law**

— Article 26, a fundamental right under Part 3 of the Constitution, guarantees the freedom to manage the religious affairs of the citizens, and is subject to only three restrictions — public order, morality, and health.

— Doing away with concept of “Waqf by use”: “Waqf by use” simply means that land used for Muslim religious or charitable purposes for a long time can be deemed to be a Waqf even if it is not registered as such.

— The 2025 law does away with the concept of Waqf by use (which it refers to as “Waqf-by-user”) for future dedications, and restricts it only to properties that are already registered as Waqf. It further states that where there is a dispute, or if a property is allegedly government-owned, that land in question will not be treated as Waqf-by-use.

— Powers of district collector: The SC also mentioned it is considering staying another provision involving powers of the district collector, which could have a bearing on Waqf-by-use lands.

— Under the 2025 law, if the district collector identifies land, currently in use as a Waqf, as government land, then it ceases to be Waqf land till a court decides the dispute. This power, which flows from a crucial proviso to Section 3(c) of the Act, could alter the status of Waqf land even before a court has decided its status.

— Inclusion of non-Muslims in Waqf boards: The petitioners argued that the 2025 law, which allows non-Muslims to be part of Waqf boards and the Waqf council, is violative of Articles 26(b), 26(c), and 26(d) of the Constitution.

— Applicability of Limitations Act: Sibal also challenged a provision in the 2025 law that allows the applicability of the Limitation Act with respect to Waqf properties. The Limitation Act essentially bars parties from making a legal claim, say, against encroachment, after a specific period of time has lapsed.

— The 1995 Waqf Act had specifically excluded the application of the Limitation Act which allowed Waqfs to act against encroachments on its properties without a specific time frame. The 2025 law removed that exception. To this, CJI Khanna said that the “Limitation Act has both its advantages and disadvantages”.

#### **COMMUNAL CAULDRON**

The three deaths in Murshidabad district during protests against the Waqf (Amendment) Act have exposed the deep political fault lines and the festering communal divide in West Bengal. Chief Minister Mamata Banerjee’s repeated assurances that she would protect minority interests, and that the Act would not be implemented in the State, have done little to assuage the Muslim community. The violence, which began on April 8, continues unabated despite prohibitory orders





and the suspension of Internet services. Mob attacks on public property have been reported from the Jangipur subdivision of Murshidabad and other parts of the State, including Kolkata. West Bengal has been a simmering communal cauldron for quite some time. Both the ruling Trinamool Congress and the Opposition BJP have sought to exploit communal polarisation for political gain. While the TMC tacitly encouraged Muslim protests against the Waqf amendments, the BJP backed communally charged Ram Navami processions across the State. Although the police have now warned of strict action against lawbreakers, their inaction before and during the current flare-up has been evident. The Calcutta High Court has since intervened, ordering the deployment of central armed police forces in Murshidabad.

The State remains on edge ahead of every major religious festival, and policing has grown weak and increasingly politicised. Even though Murshidabad witnessed similar violence in 2019 during the protests against the Citizenship (Amendment) Act, the administration has failed to prevent the current unrest. The violence is unfolding in one of the State's most impoverished regions, where men migrate for work and women earn a living by rolling beedis. As tensions have escalated over the Ram Navami processions and the Waqf amendment, political parties have chosen to fan the flames rather than promote calm. This is part of a larger and troubling trend seen across the country. The Mamata Banerjee government must act swiftly and impartially to restore normalcy. The rule of law must be firmly established, and the police must prevent violence. With Assembly elections due in a year, the BJP and the TMC appear intent on pandering to communal sentiments for political gain. This must change. The focus must shift to governance and development. As the party in power, the TMC cannot absolve itself of responsibility by merely blaming the BJP.

#### HISTORY AS BATTLEFIELD — THE PERILS OF REVERSING THE PAST

In March 2025, a wave of textbook revisions such as omitting or vilifying figures like Babur and Aurangzeb while glorifying select native rulers, coincided with rising public anger demanding the renaming or even destruction of Mughal tombs. There were viral campaigns that called for vandalising historical monuments, driven by narratives that paint centuries of India's past in black and white. While advocates claim that such moves correct colonial or biased portrayals, the selective rewriting of history often fuels polarisation, not clarity. When history becomes a battleground for ideology rather than a source of reflection, it can fracture society and foster hatred instead of understanding.

The discipline of history demands a careful and nuanced discernment of the past. It is not merely a recollection of events but a study of causes, consequences and context. However, when history is weaponised in the form of revisionism, especially with an intent to restore a perceived lost glory or correct historical wrongs by reverting to a "status quo ante", it ceases to be a guide for the present and becomes a tool for division.

Such revisionist exercises are not only dangerous but have been the root of conflicts, wars and prolonged suffering across different parts of the world. The grundnorm of this discussion is that while historical wrongs must be remembered to avoid their repetition, they must not be interpreted as mandates to reclaim past statuses or boundaries. Much of the chaos in today's world arises not because we forget history but because we seek to relive or reverse it.

#### Revisionism versus reckoning

It is important to distinguish revisionist history from historical reinterpretation. Reinterpretation is a legitimate academic exercise, where new evidence or perspectives reshape our understanding





of the past. Revisionist history, however, especially in the political sense, seeks to reinterpret the past to justify present-day political agendas, often tied to nationalism, identity politics, or territorial claims. This has been evident in various religious and political conflicts, such as the Crusades, which were themselves sparked by the belief in the sanctity of Christian control over Jerusalem. The First Crusade (1096–1099) was launched ostensibly to reclaim the Holy Land from Muslim rule, despite the region's diverse religious history. What followed were centuries of bloodshed, occupation, and retaliatory campaigns, none of which restored any meaningful peace but, instead, deepened divisions between civilisations. It is a classic example of trying to correct a perceived historical wrong through a violent reversal — not reconciliation.

The European Wars of Religion in the 16th and 17th centuries, such as the Thirty Years' War, further demonstrate the dangers of historical grievances being revived under the banner of religious or political legitimacy. The Protestant Reformation challenged centuries of Catholic dominance in Europe, leading to a brutal struggle to “restore” previous religious hegemonies. The outcome was catastrophic: millions perished, economies were ruined, and societies were devastated. Here again, the danger was not in recognising the grievances of the past but in weaponising them to reshape the present based on historical constructs. Rather than moving forward with mutual tolerance and understanding, European States plunged backward into a cycle of vengeance, each side justifying their acts through selective memories of the past.

#### **Twentieth century examples**

Perhaps the most infamous example of dangerous revisionism is Nazi Germany. Adolf Hitler's ideology rested heavily on the notion of reclaiming the glory of the German Reich and correcting the “humiliation” of the Treaty of Versailles. His rhetoric about the Aryan past, the “stab in the back” theory, and a need for Lebensraum (living space) were all rooted in a highly manipulated version of history. The attempt to reverse the outcome of the First World War by restoring German supremacy led to the Second World War and the Holocaust — a catastrophic result of trying to reengineer history through conquest and genocide.

Similarly, the Partition of India in 1947 was marked by competing historical narratives — Hindu and Muslim nationalists invoked centuries of grievances under previous rulers. What should have been a peaceful transition into two sovereign States turned into one of the worst episodes of communal violence in history, killing over a million and displacing more than 10 million. The violence was not about the future; it was about reclaiming identities and rights rooted in selective versions of the past.

In the contemporary world, Israel-Palestine remains a deeply complex and tragic case of historical grievances clashing with present-day geopolitics. Both Israelis and Palestinians stake claims based on history — often diverging, irreconcilable, and deeply emotional. Efforts to reverse history, whether through settlements, territorial claims, or denial of nationhood, have prolonged a conflict that cannot be resolved by appealing solely to the past.

In Eastern Europe, Russia's invasion of Ukraine in 2022 was partly justified by revisionist arguments about the historical unity of the Russian and Ukrainian people and the invalidity of Ukraine's post-Soviet independence. This attempt to undo post-Cold War borders in the name of historical continuity has led to massive human suffering, economic crises, and a destabilisation of the entire region.



### History as a teacher

History should be a teacher, and not a template. The purpose of understanding past wrongs is to ensure they are never repeated — not to demand restitution through acts that recreate the very conflict that they seek to avenge. The obsession with returning to a perceived golden past blinds nations and people to the opportunities of the present and the possibilities of the future. As philosopher George Santayana aptly put it: “Those who cannot remember the past are condemned to repeat it.” But equally dangerous are those who remember the past only to relive it, seeking justice through reversal, not reconciliation. The greatest service we can do to history is not to rewrite it, but to learn from it — with humility, not hubris.

### AMID FACEOFF WITH CENTRE, STALIN SETS UP COMMITTEE ON AUTONOMY OF STATES

In a charged speech in the Tamil Nadu Assembly on Tuesday, Chief Minister M K Stalin announced the formation of a high-level committee to review and recommend measures to safeguard the rights of states and rebalance the federal structure of India, accusing the Union government of repeatedly infringing upon the Constitutional powers of states.

- “To protect the rightful entitlements of the States and to enhance the relationship between the Union and state governments, a high-level committee has been formed,” Stalin said.
- Former Supreme Court judge Kurian Joseph will head the panel that also includes former IAS officer Ashok Vardhan Shetty and economist M Naganathan.
- The formation of this committee comes amid rising tensions between the DMK-led Tamil Nadu government and the BJP-ruled Centre, especially around the issues of education policy, taxation, fiscal devolution, and institutional autonomy.
- The current push gains significance in light of concern in Tamil parties that the state’s representation in Parliament is under threat due to the impending delimitation exercise. Because the state has successfully implemented population control measures, the next delimitation could reduce the number of its seats, a move Stalin called “punishment for success”.
- Stalin’s speech devoted considerable time to how education, once a state subject, has now become an arena of contention. He alleged that the National Education Policy 2020 was being used to impose Hindi in the name of a three-language formula. He accused the Centre of withholding Rs 2,500 crore meant for Tamil Nadu under the Samagra Shiksha Abhiyan scheme, a move he described as a betrayal of students’ welfare.
- Stalin said the committee would deliver an interim report by January 2026 and a final one within two years. It will examine all relevant constitutional provisions, laws, and policies, and recommend ways to reclaim powers shifted from the State List to the Concurrent List.

### Do You Know:

- The journey of India towards federalism began with its struggle for independence from colonial rule. The demand for autonomy and self-governance had a significant influence on a variety of linguistic, cultural, and geographical groupings. The framers of the Indian Constitution recognised the need to uphold our ethos, i.e. unity in diversity. Consequently, the Indian Constitution established a federal system of governance. It possesses all the traits of a federation such as bicameralism, two governments (the Union and the State), a written constitution that is neither



too easy nor too stiff to amend, and an independent court to uphold the system of checks and balances.

- Since independence, the evolution of federalism in India has been dynamic and can be examined along various phases, i.e. inner-party federalism, multi-party federalism, co-operative federalism, competitive federalism, confrontational federalism and bargaining federalism.

#### UNNECESSARY CHANGE

That the Right to Information Act and the use of RTIs have enhanced the accountability of those in governance in India goes without saying. In the last few years there have been attempts to dilute the provisions of the Act, a landmark one that was passed 20 years ago. Clearly, some in governance and administration have treated the Act and its provisions on transparency and disclosure to be encumbrances. A significant threat has now emerged in the amendment to Section 8(1)(j) of the Act, which has been introduced in Section 44(3) of the Digital Personal Data Protection (DPDP) Act, 2023. The Act itself is an outcome of K.S. Puttaswamy (2017), a judgment that upheld the right of privacy as a fundamental right under Article 21 of the Constitution. Section 8(1)(j) of the RTI Act allows government bodies to withhold “information which relates to public information” provided its disclosure is not related to public interest or results in an unnecessary invasion of privacy. While doing so, it provides the safeguard that if the Public Information Officer or an appellate authority finds public interest in disclosing such information, it could still be available. This safeguard is important. Some information related to public servants, such as college degrees or caste certificates, might be private, but as a recent and controversial case of a bureaucrat using a fake caste certificate showed, such information could be released in public interest. Section 44(3) of the DPDP act amends Section 8(1)(j) by allowing government bodies to simply withhold “personal information” without the safeguard provisions on public interest or other such exceptions.

In a letter to Congress leader Jairam Ramesh, Union Minister of Information and Broadcasting, Ashwini Vaishnaw defended the amendment, saying that Section 44(3) was aimed at preventing the RTI Act’s “misuse” and was to harmonise the requirement of right to privacy and the right to information. He also said that information such as salaries of public officials would still remain accessible through Section 3 of the DPDP Act. But by amending the RTI Act itself — an outcome that was never the intention of K.S. Puttaswamy — and by defining “personal information” vaguely in Section 44(3) of the DPDP Act, authorities could deny RTI requests of previously public data by classifying them as “personal” — and lessen public scrutiny. The RTI Act already harmonises concerns related to the right to information and privacy by subjecting them to the question of public interest. Therefore, the amendment using the DPDP Act is unnecessary and unwarranted. The government must take the concerns of civil society and transparency activists and remove the provision amending the RTI Act, in the DPDP Act.

#### INDIA TESTS LASER-DIRECTED ENERGY WEAPON SYSTEM, JOINS ELITE CLUB OF NATIONS

In a first, India entered an exclusive league of countries on Sunday after using a lethal 30-kilowatt laser-based weapon system to neutralise missiles, drone and more.

- The indigenous Mk-II(A) Laser-Directed Energy Weapon (DEW) system’ successful trial by the Defence Research and Development Organisation (DRDO) at the National Open Air Range (NOAR) in Kurnool showcased its “Star Wars” capabilities.



- Thanks to an inbuilt Electro Option (EO) system, the laser weapon system detects targets using radar. As a result, the Sunday test trial saw the futuristic weapon fire a laser beam and destroy a drone after tracking it. The target in question was reportedly a Chinese-origin drone operated by the Pakistan Army.
- The homegrown warfare defence solution is powered by the Integrated Drone Detection and Interdiction System built by the DRDO, which has a 2-kilowatt laser beam. Tapping into the game-changing electronic warfare capability, India has now entered the select league of nations — the United States, Russia, China and Israel — that have either already demonstrated it or are working on it.

**Do You Know:**

- “CHESS DRDO conducted a successful field demonstration of the Land version of Vehicle mounted Laser Directed Weapon (DEW) MK-II(A) at Kurnool today. It defeated the fixed wing UAV and Swarm Drones successfully causing structural damage and disabled the surveillance sensors. With this successful trial country has joined the exclusive club of the Global powers who possess the high power Laser DEW System,” the DRDO said in a post on X.
- Calling it just the “beginning of the journey,” DRDO Chairman Samir V Kamat told ANI, “As far as I know, it is the United States, Russia and China that have demonstrated this capability. Israel is also working on similar capabilities, I would say we are the fourth or fifth country in the world to demonstrate this system.”
- He added, “The synergy that this lab has achieved with other DRDO labs, industry and academia, I am sure we will reach our destination soon... We are also working on other high energy systems like high energy microwaves, electromagnetic pulse. So we are working on a number of technologies that will give us Star Wars capability. What you saw today was one of the components of Star Wars technologies.”

**AFTER PROLONGED EFFORTS, GOVERNMENT SITES START USING HINDI WEB ADDRESSES**

Many Union government websites have started using a Hindi Web address, following years of efforts by supporters of Universal Acceptance (UA), a movement that has advocated for having more of the Internet be available — and accessible — in languages other than English. Two key efforts under the UA umbrella have been the so-called internationalised domain names (IDNs) and email addresses.

Now, the Ministry of Home Affairs mainly uses a Hindi URL

with both the Hindi and English versions of the website being available under this address — a mirror of the site under the previous English URL (mha.gov.in) remains available. The addresses swap out India’s .in country code top-level domain for an Indian language equivalent.

Historically, internationalised Web and email addresses have been a challenge, as the domain name system (DNS) — and the backend processes that made browsing the web work — have been limited to American Standard Code for Information Interchange (ASCII), the mainly English-language set of characters that early computing relied on. Non-English languages, and even many variations of the Latin script, are not a part of ASCII’s character set.





Since the 1980s, researchers around the world have toiled away to mitigate these limitations, and by now, most Web browsers and commercial email services support IDNs, albeit through a backdoor: a non-Latin URL is processed as a “Punycode” shorthand that is essentially a garbled ASCII script, but users are shown the intended address.

The struggle has been adoption. Even as large parts of the Web are in Indian languages, their addresses tend to be in the Latin script. The Union government has for years tried to encourage adoption of .bharat IDNs, which include 22 regional languages aside from Hindi, such as இந்தியா for Tamil, but private pickup has been scarce.

The Union government’s own websites have tried to lead by example, with many sites, such as those of the Ministry of Electronics and Information Technology, the National Internet Exchange of India (NIXI, which operates the .in and Indian languages’ domain name registry), the Ministry of Minority Affairs, having adopted Hindi Web addresses, at least for the Hindi version of their pages.

The IT Ministry and NIXI maintain Bhashanet, a dedicated portal to help government organisations add an IDN. Private adoption across other languages has been even smaller — a Google search returns less than one page of results for websites that use a இந்தியா IDN. The challenge, after all, could be in prying even Indian language sites and their users away from an English default. “I have spent seven good years working on the UA problem,” Ajay Data, a technology CEO who has urged firms for several years to fix systems that don’t accept IDNs, said at a recent UA event in Delhi.

“And this is my conclusion today: just raising awareness and fighting about the adoption and delivery is not the issue. We need a benefit.” In other words, websites need a compelling case to add web addresses (and email addresses) in regional languages, now that many of the biggest browsers and email systems support the feature.

## HOW WILL GENETIC MAPPING OF INDIANS HELP?

### The story so far:

The preliminary findings of the GenomeIndia project, which attempted to study whole genomes of 10,000 healthy and unrelated Indians from 83 population groups, were published in the journal Nature Genetics on April 8. After excluding two populations, the published findings are based on the genetic information of 9,772 individuals — 4,696 male participants and 5,076 female participants.

### When was it launched?

The 10,000-human genome study was launched in January 2020 with funding from the Department of Biotechnology. Blood samples and associated phenotype data such as weight, height, hip circumference, waist circumference and blood pressure were collected from 20,000 individuals representing 83 population groups — 30 tribal and 53 non-tribal populations — spread across India. Of the 20,000 individuals, DNA samples from 10,074 individuals were subjected to whole genome sequencing, but later two populations were excluded.

The GenomeIndia project is a collaborative effort of 20 institutions. The genome sequencing was carried out by the Centre for Brain Research at IISc Bengaluru, the Centre for Cellular and



Molecular Biology in Hyderabad, Institute of Genomics & Integrative Biology in Delhi, National Institute of Biomedical Genomics in Kolkata, and Gujarat Biotechnology Research Centre in Gandhinagar.

#### **How were diverse samples collected?**

A median of 159 samples from each non-tribal group and 75 samples from each tribal group chosen were collected from 83 population groups that inhabit over 100 distinct geographical locations to estimate the relatively rare mutations that are important to understand complex diseases. The samples were taken from unrelated individuals to ensure accurate estimation of mutation frequencies across groups. Three to six parent-child pairs were included in each population group to uncover de novo mutations (mutations that occur randomly in a child but not seen in parents).

Genomes of five tribes across India — Tibeto-Burman tribe, Indo-European tribe, Dravidian tribe, Austro-Asiatic tribe, and a continentally admixed outgroup — were sequenced. Genomes of three non-tribes — Tibeto-Burman non-tribe, Indo-European non-tribe, and Dravidian non-tribe — were also sequenced. Since language is an established proxy for genetic diversity in the Indian population, sampling was done to appropriately represent the four large major language families as well — Indo-European, Dravidian, Austro-Asiatic and Tibeto-Burman. However, the four ancient populations living in the Andamans, dating back 65,000 years ago, and two relatively modern populations from about 5,500 years ago, were not included.

#### **What do the preliminary findings reveal?**

In total, 180 million mutations have been found from the individuals sequenced; while 130 million variations are in the non-sex chromosomes (22 pairs of autosomes), 50 million mutations are in the sex chromosomes X and Y. It should not be surprising that 180 million mutations were found. The reason: the human genome has three billion base pairs of DNA and the genome of 9,772 individuals were sequenced. Most importantly, the 9,772 individuals belong to 83 distinctly different endogamous groups. Of that, the non-coding regions in the genome, which have DNA sequences that do not directly code for proteins, comprise 98%. A large number of the 180 million variants found in the sequenced genomes of 9,772 individuals are very likely to be present in the non-coding regions.

Polymorphisms or variations in the non-coding regions of the human genome, particularly the mutations that are evolutionarily conserved, will help in tracing evolutionary history. Tracing evolutionary history becomes important as many of the “contemporary Indian populations have originated from a few founding groups and have maintained distinct identities through centuries of endogamy.”

#### **What is the significance of the mutations in endogamous groups?**

Endogamy is highly prevalent in all the 83 population groups under study, though the degree varies. As a result of the centuries-long practice of endogamy, population-specific unique variations, including distinct disease-causing mutations with amplified frequencies, are likely to be seen within specific groups. While the global genomic landscape is predominantly Eurocentric, and other genome projects have documented genetic diversity, India, with its prolific and distinct endogamous populations, has been severely underrepresented in these studies. The study is therefore important for having captured the genetic diversity of “one of the highly underrepresented populations in the global genomics landscape”. Genetic mutations found



associated with endogamous population-specific diseases will help the government to come up with targeted public health policies.

#### **What are the medical implications?**

The 130 million variations identified are expected to spur studies that aim to determine the possible roles of population-specific genetic mutations in various diseases. Understanding genetic variations can pave the way for precision medicine, ensuring treatments and interventions tailor-made for Indian genetic profiles. The data on variants associated with diseases will enable the development of affordable, genomics-based diagnostic tools, facilitating early detection, and prevention and management of diseases in India.

### **ARE BIRTHS, DEATHS BEING PROPERLY REGISTERED?**

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

On March 17, the office of the Registrar General of India (RGI) cautioned private and government hospitals to report incidents of births and deaths within 21 days, The Hindu reported. This circular by the Vital Statistics division of the RGI, which works under the Union Home Ministry (MHA), was issued after it was found that many medical institutions were flouting the law.

#### **What did the March 17 circular say?**

The circular stated that around 10% of births and deaths are not getting registered in the country. It said that while 90% of birth or death events are getting registered and significant progress has been made towards the goal of universal registration, “the target of 100% registration” is yet to be achieved. According to an RGI report, the level of registration of births and deaths in the country in 2011 was 82.4% and 66.4% respectively. According to the Registration of Birth and Death Act, 1969, which was amended in 2023, registration of all births and deaths is mandatory. As per Section 23(2) of the RBD Act, “negligence by the registrar in registering any birth or death” is punishable with a fine. The fine was enhanced to upto ₹1,000 from ₹50 in the amended Act.

#### **Who can register such events?**

Under the Civil Registration System (CRS), controlled by the RGI, government hospitals have been entrusted with the responsibility of functioning as registrar. Private hospitals are supposed to report the events in their jurisdiction to the registrar so that certificates can be issued to the family.

The RBD Act empowers the RGI to take steps to coordinate and unify the activities of Chief Registrars who are appointed by State governments. The registration is performed by different departments in States. While in some States and Union Territories such as Assam, Chandigarh, Haryana, Lakshadweep, Meghalaya, Odisha, Punjab, Sikkim and the Andaman and Nicobar Islands, the Health department is involved in all levels of registration, in other States like Kerala the registration is done by the panchayat department, while in Bihar the directorate of economics and statistics does it. According to the 2023 amendment to the RBD Act, the RGI shall maintain a database at the national level and it is obligatory that Chief Registrars and Registrars share the information with the Centre. According to the 2023 Act, which became effective October 1, 2023 all births and deaths in the country are to be digitally registered through Centre’s portal — the Civil Registration System.



### **Why through a centralised portal?**

Effective October 1, 2023, digital birth certificates became the single and only document to prove the date of birth for various services such as admission to educational institutions, government jobs, marriage registration among others. The data will be used to update the National Population Register (NPR), ration cards, property registration and electoral rolls. The NPR, first collected in 2010 and updated in 2015 through door-to-door enumeration already has a database of 119 crore residents. NPR is the first step to the creation of the National Register of Citizens, per the Citizenship Act, 1955. The updation of NPR is currently on hold as it is to be done simultaneously with the first phase of the next Census, which has been indefinitely delayed.

### **What were other concerns of RGI?**

The RGI said that it has been observed that some hospitals instead of registering the events wait for the relative of the baby or the deceased to approach them and only then, do they begin the process of registration. Instances have also been reported that some private hospitals don't report birth and death events to the concerned registrar and advise the relatives to report it himself. The RGI said that some registrars do not take adequate measures for making the registration process citizen friendly, stressing that birth and death certificates need to be issued within seven days.

### **What about the Vital Statistics of India report?**

The report which depicts data regarding infant mortality, still-birth and deaths at the national level has not been published since 2020. Such data is used by the government in socio-economic planning, to evaluate the effectiveness of various social sector programs and also serves as the cornerstone of the public health system. The report is a compilation of all the vital statistics reports of State governments. States and UTs such as Himachal Pradesh, Karnataka, Delhi, Chandigarh, Mizoram, Goa, and Arunachal Pradesh have published their reports till 2022. The last published Vital Statistics Report for Kerala was in 2021 and Mizoram is the only State to have published the report in 2023.

The 2020 report published by the RGI said that the number of registered births has decreased from 2.48 crore in 2019 to 2.42 crore in 2020 — a decrease of about 2.4%. In the case of registered births, there has been a fall in the year 2020, in almost all States except Bihar, Haryana, Madhya Pradesh, Rajasthan, Sikkim, Andaman and Nicobar Islands, Jammu and Kashmir, and Ladakh compared to 2019. The number of registered deaths increased from 76.4 lakh in 2019 to 81.2 lakh in 2020.

## **WHY ARE ASHA WORKERS PROTESTING IN KERALA?**

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

For over two months now, a section of Kerala's 26,125-strong community of Accredited Social Health Activists (ASHAs) have been on a day-night agitation on the streets demanding better remuneration and retirement benefits. While the agitation gained much attention and was also raised in Parliament, the issues raised by the ASHAs remain unresolved.

### **Why are they protesting?**

ASHAs in Kerala are given a monthly honorarium of ₹7,000 and a fixed incentive of ₹3,000. Depending on the area where they work (for example, the tribal belt), they also get additional





incentives. The payment of the entire honorarium and incentives are dependent on them fulfilling certain work-related criteria. The honorarium is paid by the State while the incentives are paid by the Centre and State at a 60-40 ratio. The State government claims that Kerala pays one of the highest honorarium to ASHAs, whereas the incentives given to ASHAs by the Union government for various services has remained the same from the inception of the scheme. Kerala Health Minister Veena George's statement that almost all ASHAs in the State are drawing anywhere from ₹10,000- ₹13,000 a month was refuted by the ASHAs who pointed out that they received much less in reality because of the criteria linked to honorariums.

**What are the long term demands?**

In Kerala, which has one of the highest minimum wage structures, and where daily wages for various jobs range anywhere from ₹700-₹1,200, ASHAs earn less than ₹250 daily. Though their immediate demands were the release of pending amounts due to them, they also demanded that the criteria linked to the honorarium be removed. Their main demand is to hike the honorarium to ₹21,000 a month so that they receive at least minimum wage (₹700 daily). They also sought a lump sum of ₹5 lakh on retirement. The ASHA scheme, when conceived in 2005, envisaged ASHAs as health volunteers rather than as a regular workforce. Hence they receive no fixed salary, no pension or other social security benefits. ASHAs point out that they would forever remain on the fringes unless they were made into a regular workforce.

**What is the State saying?**

The State Government has all along maintained that ASHAs come under the Union government and that it was entirely up to the Centre to change the fate of ASHAs by making fundamental changes in the scheme such as revising the incentive pattern and changing their employment status from non-paid "health volunteers" to a regular workforce. The State has also called out the Centre for refusing to give the cash grant it owed to the State National Health Mission (NHM) for the year 2023-24 — ₹636 crore — which has precipitated the current crisis and totally derailed the functioning of the NHM. Though the Government issued orders de-linking the conditions which were attached to the honorarium payment, it has refused to relent to the ASHAs' demand for a hike in honorarium or retirement benefits, citing the State's precarious finances.

Moreover, the State government is peeved that the Kerala ASHA Health Workers' Association (KAHWA) which is leading the agitation is doing so in front of the Secretariat and not in front of the Raj Bhavan. It has tried to discredit the agitation, accusing KAHWA of leading an "anti-government" movement.

**What is the current position?**

The Union Health Minister has declared in the Rajya Sabha that the incentives for ASHAs would be revised, yet no timeframe has been fixed for the same.

During the last round of negotiations, the State Government put forth a suggestion that a committee be set up to study the issues of ASHAs, including the honorarium hike. KAHWA suggested that in the interim, ASHAs be given a hike of at least ₹3,000 — an increase of ₹100 per day — which was rejected by the State.



## MONSOON ANTICIPATION

The India Meteorological Department (IMD) has given a reassuring signal that from June to September, India is likely to receive 'above normal' monsoon rainfall, or 5% more than the historical average of 87 cm. Were this to pan out as projected, it would be a second consecutive year of 'above normal' rains. Last year, India received 8% more monsoon rain than what is typical from June to September. This is good news for kharif sowing, which will help improve stocks of grain and shore up reserves for exports. This year the government has also committed to procure, at the minimum support prices, pulses in an attempt to reduce the import bill. As pulses are a more land-intensive crop than cereal, good rains are essential for an adequate harvest. The IMD follows a two-stage system of monsoon forecasts: the first in April, followed by an update in mid-May, which has additional information on rainfall distribution. These are regularly updated monthly, alongside a host of short-term forecasts. Thus, what is forecast in April may not exactly unfurl itself given the limitations of meteorological science and the computational tools required. However, this year, there is certainty about the absence of an El Niño. Associated with a warming of the Equatorial Pacific and with six out of 10 years linked to weak monsoon rain, a monsoon without an El Niño augurs well for India. Another encouraging factor is a parameter called the 'Eurasian snow cover,' or snow cover areas of northern hemisphere and Eurasia (January-March, 2025). These were 'below normal,' and, according to IMD meteorologists, have an 'inverse relationship' with that year's summer monsoon rainfall. An inverse relationship means that less snow corresponds to more rain.

For its monsoon forecasts, the IMD uses weather models that simulate the ocean and the atmosphere. This year, except for the El Niño, none of the 'oceanic parameters' indicates either way — how the monsoon will pan out. This is not unusual but means that factors closer to the sub-continent — cyclonic activity in the Bay of Bengal and Arabian Sea for instance — will have greater importance to the monsoon. Past years with above normal rainfall have brought flooding and landslides, accentuated by the challenges of global warming. Kerala's Wayanad disaster in July last year, that killed at least 200 people and displaced several times that number, is just one instance. Therefore, positive news on the monsoon front should not distract the focus of the Centre and States from putting in place adequate infrastructure to minimise damage and the loss of lives.

## INDIA TO HOST INTERNATIONAL BIG CAT ALLIANCE

The International Big Cat Alliance (IBCA) signed an agreement with the central government on Thursday formalising India as the headquarters and secretariat of the alliance, over two months after it came into force as a full-fledged treaty-based intergovernmental organisation.

— The IBCA was launched at the initiative of India to focus on global conservation of seven big cats —the tiger, lion, leopard, snow leopard, puma, jaguar and cheetah. Prime Minister Narendra Modi launched the IBCA in April 2023 during the 50th year celebrations of Project Tiger.

— "The agreement provides for India to be the host for the IBCA headquarters and secretariat; and it entails necessary provisions to enable IBCA to meet its intended objectives and also for efficient discharge of its official functions," a press note issued by the Ministry of External Affairs (MEA) stated.

— The agreement text pertains to visas, privileges, and immunities to be extended to the IBCA secretariat and personnel, premises, entry into force, supplementary agreements, and some general provisions, the press note said.



— India formally joined the IBCA in September 2024. After five signatory countries—India, Liberia, Eswatini, Somalia, and Nicaragua—ratified the IBCA framework agreement, the alliance came into force as a global legal entity.

**Do You Know:**

— India is home to five of the seven big cats: the tiger, lion, leopard, snow leopard, and cheetah, except for the puma and jaguar.

**PANEL GIVES NOD TO SHIFT CHEETAHS FROM KUNO PARK TO GANDHI SAGAR**

Even as the Centre is in talks with Kenya, South Africa and Botswana to translocate the next batch of cheetahs to Madhya Pradesh, the Cheetah Project Steering Committee is learnt to have cleared the relocation of some of the cheetahs from Kuno National Park to Gandhi Sagar Wildlife Sanctuary.

- The steering committee, however, advised that the relocation of the cheetahs to Gandhi Sagar, although in the same state, should be carried out with care, taking into account stress factors like the heat while moving them by road. Gandhi Sagar is about 300 kilometres from Kuno.
- The decision, taken at a meeting last week, comes even as concerns linger over availability of adequate prey and the presence of leopards, the competing co-predators.
- “It was discussed and agreed that a few cheetahs could be moved to Gandhi Sagar soon,” said a source aware of the developments.
- Gandhi Sagar Wildlife Sanctuary has been earmarked as an important link for long-term conservation of cheetahs, with the aim to establish a metapopulation of 60-70 cheetahs across the Kuno-Gandhi Sagar landscape, spread across Madhya Pradesh and Rajasthan.
- For over a year now, the Madhya Pradesh forest department has been preparing Gandhi Sagar for the introduction of cheetahs. Although it was to be a home for the next batch of African cheetahs, talks between India and African nations have not materialised yet.
- In the first phase, the plan is to release four-five cheetahs into a fenced area in the western part of the sanctuary. An area of 64 square kilometres has been cordoned off and leopards have been moved out to prevent conflict between the two wild cats.
- It is yet to be finalised if the cheetahs to be moved to Gandhi Sagar would be those which were released into the wild at Kuno, or the others which are still inside large enclosures. Of the 26 cheetahs at Kuno, 17 are in the wild and nine remain in enclosures.
- A deficit of prey at Gandhi Sagar has been a concern and the steering committee discussed the ongoing efforts to augment prey base through introduction of chital from other forests of Madhya Pradesh. For in-situ (on-site) breeding of prey, there are herbivore enclosures at Gandhi Sagar.

**Do You Know:**

- Project Cheetah kickstarted in 2022 with the translocation of eight cheetahs from Namibia and 12 from South Africa to Kuno National Park. The project has faced setbacks with the deaths of eight of these cheetahs and five cubs born in Kuno.



- The Cheetah Project Steering Committee was constituted by the National Tiger Conservation Authority in May 2023 to review and monitor the project, and also act as an advisory body.
- Cheetahs are among the oldest of the big cat species, with its ancestors going back about 8.5 million years. It is listed as “vulnerable” by the World Conservation Union (IUCN) Red List of Threatened Species. Two subspecies, the Asiatic cheetah and the Northwest African cheetah, are listed as “critically endangered”.

#### DIRECTIONS WITHOUT MAPS — LESSONS FROM AN OLIVE RIDLEY TURTLE

It is a story of perseverance, guided not by maps but by instinct, and of a long arduous journey spanning 4,500 km. The quiet odyssey of an Olive Ridley turtle — from Odisha’s Gahirmatha beach on the eastern rim of the Indian Subcontinent to the sands of Guhagar in Maharashtra — offers a moment of pause, and a message: That in the end, what endures is intent. Turtle 03233, as its tracking tags revealed, crossed coastlines and currents, possibly looped around Sri Lanka, navigated the wild geometry of the Indian Ocean, before finally anchoring itself with quiet purpose on the Konkan coast. From that solitary arrival came 125 eggs, and 107 hatchlings, fragile continuities born of a voyage that has left ecologists astonished. In the absence of satellite precision — the flipper tags on 03233 are made of cost-effective titanium and inconel — certainty drifts like a shadow through saltwater. But researchers believe this could be the first such migratory feat recorded among Olive Ridleys.

Why this turtle strayed from the mass nesting shores of Odisha where thousands arrive in synchrony for the great arribada — a convergence of female Olive Ridleys along the Odisha coast to lay eggs — remains a mystery. But its voyage has led to a widening of conservation maps, a shift in the way ecology is traced across coastlines.

In a world obsessed with destination and definition, 03233’s long trek is also a parable for patience. It leaves one with lessons that cannot be tagged or tracked, only realised: That the measure of a journey lies not always in its recognition, but in quiet defiance. That the path one takes — long, looping, uncertain — may defy comprehension, yet still hold purpose. That solitude, too, can be generative. And that endurance, measured not in urgency but in faith, is its own kind of grace.

#### Do You Know:

- Olive ridley turtles (*Lepidochelys olivacea*) are the smallest and most abundant of all sea turtles in the world. They get their name from the olive green colour of their heart-shaped shell, and inhabit warm waters of the Pacific, Atlantic, and Indian oceans.
- Olive ridleys can grow about two feet in length, and 50 kg in weight. Scientists do not know exactly how long they live, but like other sea turtles, Olive ridleys are likely long-lived — they reach maturity around 14 years of age.
- According to the Marine Turtle Specialist Group (MTSG) of the International Union for the Conservation of Nature (IUCN), there has been a 50% reduction in population size of these sea turtles since the 1960s. The main reasons behind their decline include long-term collection of eggs and mass killing of adult females on nesting beaches, and unintended capture in fishing gear which can lead to drowning or cause injuries that result in death.





- These marine reptiles are best known for their unique mass nesting — also called arribada, Spanish for “arrival” — during which thousands of females come together on the same beach to lay eggs. “Arribada nesting is a behaviour found only in the genus *Lepidochelys* which includes the Kemp’s ridley and olive ridley sea turtles. Although other turtles have been documented nesting in groups, no other turtles (marine or land) have been observed nesting in such mass numbers and synchrony,” according to a report on the US agency National Oceanic and Atmospheric Administration’s (NOAA’s) website.
- While solitary nesting by Olive ridleys is known to take place in approximately 40 countries worldwide, arribada nesting occurs on only a few beaches. The coast of Odisha (where Rushikulya and Gahirmatha rookeries are situated) is the largest mass nesting site for the Olive ridley, followed by the coasts of Mexico and Costa Rica.

#### BHAGAVAD GITA AND NATYASHASTRA ADDED TO UNESCO’S MEMORY OF THE WORLD REGISTER: ALL YOU NEED TO KNOW

Manuscripts of the Bhagavad Gita and Bharata’s Natyashastra are among the 74 new additions to UNESCO’s Memory of the World Register this year.

— Union Culture Minister Gajendra Singh Shekhawat said this was a “historic moment for Bharat’s civilisational heritage”. “... we now have 14 inscriptions from our country on this international register,” Shekhawat said on X.

— NATYASHASTRA: Traditionally attributed to the sage Bharata, Natyashastra is an ancient Sanskrit treatise on performing arts. Comprising 36,000 verses, the “Natyashastra embodies a comprehensive set of rules that define natya (drama), abhinaya (performance), rasa (aesthetic experience), bhava (emotion), sangita (music),” the UNESCO citation says.

— Natyashastra is most notable for its exposition of the concept of rasa, literally “juice/essence”, which Bharata says is the goal of any performance art. “Bharatamuni makes a groundbreaking statement in Natyashastra, asserting that ‘no meaning can blossom forth without rasa’, a profound contribution to world literature,” the UNESCO citation says.

— BHAGAVAD GITA: Traditionally attributed to the sage Vyasa, Bhagavad Gita is a Sanskrit scripture comprising 700 verses that are organised in 18 chapters, embedded in the sixth book (Bhishma Parva) of the epic poem Mahabharata.

— The text is generally dated to the first or second century BCE, although there is considerable debate on the matter. According to Winthrop Sargeant, who produced one of the most-regarded English translations of the Gita, the oral composition was likely written down for the first time in the second or third centuries CE. (Sargeant, Bhagavad Gita, 1979).

#### Do You Know:

— The United Nations Educational, Scientific and Cultural Organization, better known as UNESCO, launched the Memory of the World (MoW) Programme in 1992 with the aim of “guarding against the collective amnesia, calling upon the preservation of the valuable archive holdings and library collections all over the world, and ensuring their wide dissemination”.



— The central project of the MoW Programme was to create a compendium of documents — manuscripts, oral traditions, audio-visual materials, and library and archive holdings — which are of “world significance and outstanding universal value”. This is the MoW Register.

— Beginning in 1997, the Register has been biennially updated — with the exception of a lengthy gap between 2017 and 2023 — with between nine (in 1999) and 78 (in 2017) additions. In any year, at most two submissions from a country are added. With the latest additions, the Register now contains 570 entries.

— The Register contains 13 submissions by India, including two joint-submissions. These range from the Rig Veda (added in 2005) and the collective works of the Shaivite philosopher Abhinavagupta (added in 2023), to the archives of the first summit meeting of the Non Aligned Movement in Belgrade in 1961 (added in 2023) and the archives of the Dutch East India Company (added in 2003).

## A MEMORY AND A PROMISE

Sumit Samos Writes: At a time when political discourse often feels bankrupt of moral imagination, Ambedkar offers us a vision of justice rooted in dignity, law, and rationality.

- Dr Bhimrao Ramji Ambedkar is regarded today as among the tallest anti-caste Dalit leaders of India, a legal luminary who chaired the drafting of the Indian Constitution, and a man who championed a progressive vision for society.
- He was well aware of the reality that the end of centuries of colonial rule would not be enough to improve the condition of Dalits, women and other marginalised groups. Existing hierarchies and systems of inequality would continue to operate, and perhaps the biggest such perpetrator was the caste system.
- In 1936, Ambedkar was set to deliver a speech titled ‘Annihilation of Caste’ at a conference of the reformist Jat-Pat-Todak Mandal in Lahore. However, it was cancelled over demands for Ambedkar to edit the contents of his speech, which he refused to do.
- The enduring iconisation of Babasaheb by Dalits — despite relentless hostility and acts of desecration directed at his statues — has drawn both incredulity and resentment from sections of India’s elite.
- He understood with piercing clarity the dangers posed by religious majoritarianism and upper-caste dominance — if, unchecked, they could devastate social and religious minorities. Unlike his contemporaries, who placed their faith in moral appeals or modernisation — Gandhi, who urged Hindus and Muslims to embrace peace through moral introspection; Nehru, who believed industrial progress would resolve social hierarchies; and Sardar Vallabhbhai Patel, who implored minorities to trust the goodwill of the majority — Ambedkar insisted on enforceable constitutional safeguards and institutional protections.
- He reinterpreted Indian history by centring the narratives of Dalit-Bahujans, in contrast to the glorification of ancient Hindu civilisation and anti-colonial nationalism that dominate conventional historiography.
- He was unsparing in his critique — not only of Hindu orthodoxy and colonial indifference but also of nationalist icons who ignored the plight of the oppressed. Yet, he acknowledged the British



contribution in introducing the principle of equality before the law — he saw it as a momentous event that enabled the possibility of justice in a deeply hierarchical society.

**Do You Know:**

- Every year, April 14 is marked as Ambedkar Jayanti to celebrate the birth anniversary of Dr. Bhimrao Ambedkar, the 'Father of the Indian Constitution' and the first Law Minister of Independent India. It is also known as Equality Day, as Dr Ambedkar spent his life fighting for the rights of women, labour, and oppressed communities in India – eradicating social discrimination and thereby advocating equality for all the citizens of India in the eyes of the law.
- Bhimrao Ramji Ambedkar, popularly known as BR Ambedkar remains one of the most instrumental figures in India's democracy. Born on April 14, 1891, Ambedkar donned several hats. He was a jurist, economist, a politician and a social reformer.
- On October 14, 1956, B R Ambedkar along with 3,65,000 of his Dalit followers made history when they decided to leave the folds of Hinduism and embrace Buddhism. The conversion had come two decades after he had famously said that though he was born a Hindu, he would not die as one. The announcement of conversion in 1935 had come after a series of agitations for human rights for "untouchables".

#### THE FEARLESS SIR SANKARAN NAIR AND THE STORY OF THE JALLIANWALA BAGH CASE

Prime Minister Narendra Modi on Monday recalled the nationalist and jurist Sir Chettur Sankaran Nair, who fought a legendary courtroom battle against a senior official of the Raj who had sued Sir Sankaran for holding him responsible for the Jallianwala Bagh massacre of 1919.

- Nair was born in 1857 in an aristocratic family of Mankara village in Malabar's Palakkad district. After Nair graduated from Presidency College in Madras and got a degree in law, he was hired by Sir Horatio Shepherd who later became Chief Justice of Madras High Court.
- Since his early days as a lawyer, Nair came to be known for an uncompromising commitment to what he believed, irrespective of the strength of the opposition he faced. This earned him the ire of the British and made him unpopular among his colleagues and peers; he was also despised by the Brahmins of Madras.
- Edwin Montague, the Secretary of State for India, once described Nair as an "impossible person" who "shouts at the top of his voice and refuses to listen to anything when one argues, and is absolutely uncompromising" (cited in The Case That Shook the Empire).
- Nair was a lawyer of stellar capabilities and a social reformer of formidable credentials. In 1897, he became the youngest president of the Indian National Congress. By 1908, he had been appointed as a permanent judge of Madras High Court. His best-known judgements indicated his commitment to social reforms — in *Budasna v Fatima* (1914), he ruled that those who converted to Hinduism could not be treated as outcastes, and in a few other cases, he upheld inter-caste and inter-religious marriages.

**Do You Know:**

- Nair believed in India's right to self-government. In 1919, he played an important role in the expansion of provisions in the Montagu-Chelmsford reforms which introduced a system of



dyarchy in the provinces and increased participation of Indians in the administration. Following the massacre of Jallianwala Bagh, he resigned from the Viceroy's Council in protest.

- In 1922, Nair published *Gandhi and Anarchy*, a book in which he spelt out his critique of Gandhi's methods of non-violence, civil disobedience, and non-cooperation. He also accused Michael O'Dwyer, who was Lieutenant Governor of Punjab at the time of the massacre, of following policies that led to the deaths.
- O'Dwyer sued Nair for defamation in England, expecting the English court to side with him. The trial before the King's Bench in London went on for five and a half weeks. It was the longest-running civil case at the time.
- The 12-member all-English jury was presided over by Justice Henry McCardie, who made no attempt to hide his bias toward O'Dwyer. The jury sided with O'Dwyer by a majority of 11 against 1, the lone dissent coming from the Marxist political theorist Harold Laski.
- Nair was ordered to pay £500 and the expenses of the trial to the plaintiff. O'Dwyer said he would forgo the penalty if Nair apologised. Nair refused.
- The trial had a resounding impact on the British empire in India. At a time when the nationalist movement was gaining momentum, Indians saw in the judgement the clear bias of the British against them and an effort to shield their own.

#### RANJIT NAIR, PHILOSOPHER AND PASSIONATE ADVOCATE OF SCIENCE, PASSES AWAY

Ranjit Nair, intellectual and founder of the Centre for Philosophy and Foundations of Science (CPFS), died of a cardiac arrest at his residence here on Monday. He was 70.

Passionately committed to popularising science, the CPFS, led by Dr. Nair, played a key role in getting world-renowned scientists to lecture in India.

Cambridge astrophysicist Stephen Hawking, who lectured in New Delhi and Mumbai in 2001, came on an invitation facilitated by the CPFS.

In 2005, the CPFS organised lectures here by Roger Penrose, co-winner of the Nobel Prize for Physics in 2020.

These were in a large way possible due to the personal relationships and contacts Dr. Nair nurtured during his years in the United Kingdom.

A writer himself, Dr. Nair has works such as *Mind, Matter and Mystery* and *The Republic of Science*.

He edited the voluminous, collected works of E.C.G. Sudarshan, the Kerala-trained physicist who then worked in several leading American universities. Despite significant contributions to the fundamental physics of matter, Dr. Sudarshan was said to have been denied a Nobel Prize twice.

"He was somebody who was strenuously engaged, indefatigable I would say, in getting top quality minds to India. There are few people who are as committed to the cause of science dissemination as Professor Nair," K. Vijay Raghavan, biologist and former Principal Scientific Advisor (PSA), told The Hindu.





A lifelong champion of Indian science and its history, Dr. Nair played a key role in getting a bust of Jagadish Chandra Bose installed at Christ College, Cambridge, of which he was an alumnus.

## SHORT NEWS

### LONG-DELAYED ISRO-NASA MISSION NISAR MAY FINALLY BE LAUNCHED IN JUNE

The long-awaited NISAR (NASA-ISRO Synthetic Aperture Satellite) mission, a first-of-its-kind collaboration between the space agencies of India and the US, may finally be launched in June.

### CONSUMER WATCHDOG WARNS COACHING CENTRES AGAINST MISLEADING ADS AHEAD OF IIT-JEE RESULTS

The Central Consumer Protection Authority (CCPA) has warned coaching centres against issuing misleading advertisements after results of competitive exams such as IIT-JEE, NEET, and UPSC examinations are declared. The country's top consumer watchdog has advised coaching centres to strictly adhere to the Consumer Protection Act 2019 and Guidelines for the Prevention of Misleading Advertisements in the Coaching Sector 2024.

### QUALITY CONTROL ORDERS (QCOS)

- According to NITI Aayog Vice Chairperson Suman Bery, the Quality control orders (QCOs) for inputs are a “malign intervention” to restrict imports and lead to high costs for MSMEs.
- QCOs require foreign exporters and domestic producers to mandatorily meet specific quality norms to obtain a certification from the Bureau of Indian Standards (BIS), without which they cannot sell covered products in the Indian market.
- A QCO is a type of technical regulation that can act as a barrier to trade for foreign exporters. As of March 12, India had issued 187 QCOs covering 769 products.

### DUSTLIK

- The sixth edition of the joint military exercise ‘Dustlik’ between India and Uzbekistan is being held at the Foreign Training Node (FTN) at Aundh, Pune from April 16 to 28.
- Exercise Dustlik, which means friendship in Uzbek, is an yearly event conducted alternatively in India and Uzbekistan. The last edition was conducted at Termez in Uzbekistan and at Pithoragarh in Uttarakhand in 2023.
- The aim of the exercise is to foster military cooperation and enhance combined capabilities to execute joint operations in various environments and terrains.

### SURYA KIRAN AEROBATIC TEAM (SKAT)

- The Indian Air Force's prestigious Surya Kiran Aerobatic Team (SKAT) enthralled the audience with a breathtaking show at the Namkum Army Ground in Ranchi.
- The SKAT, formed in 1996, has performed over 500 such shows across India and the world, including Sri Lanka, Myanmar, China, Singapore and the UAE, the official said.

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



— Known for its motto 'Sadaiva Sarvottam' (Always the Best), the team's air show is part of the IAF's outreach programme to inspire the youth and raise awareness about the armed forces.

## 2-DAY CONCLAVE ON BUDDHISM IN ARUNACHAL PRADESH NEXT WEEK

In a first, the government is organising a two-day conclave starting April 21 in Arunachal Pradesh to highlight the spread and impact of Buddhism in India's Northeast. To be organised jointly by the International Buddhist Confederation (IBC) in collaboration with the Ministry of Culture, the event at Namsai — just bordering Myanmar — is likely to be attended by Chief Minister Pema Khandu and Deputy CM Chowna Mein, officials said.

## NEW FROG SPECIES

A new species of frog, named *Leptobrachium aryatum*, was discovered after 21 years of study in Garbhanga Reserve Forest, Assam. It was named after Arya Vidyapeeth College, a respected institution in the area. The frog is distinguished by its unique orange-black eyes, reticulated throat pattern, and smooth call. Four zoologists confirmed its distinct species status through DNA and morphological analysis.

## IRONWOOD — NEW COMPUTER CHIP FROM GOOGLE

— Recently, Google has launched a new computer chip, called Ironwood. It is the company's seventh-generation TPU, or tensor processing unit, which has been designed to run artificial intelligence (AI) models.

— Processing units are essentially hardware units that are the brain of a computer. A CPU is a general-purpose processor that can handle various tasks. It has at least a single core — the processing unit within the CPU that can execute instructions.

— In the initial years, CPUs used to have just one core but today, they can contain from two to up to 16 cores.

— Unlike a CPU, a GPU is a specialised processor (it is a type of application-specific integrated circuit, or ASIC) which has been designed to perform multiple tasks concurrently rather than sequentially (like in a CPU).

— A TPU is also a type of ASIC, meaning it is designed to perform a narrow scope of intended tasks. It was first used by Google in 2015. They are engineered to handle tensor — a generic name for the data structures used for machine learning — operations. They enable fast training of AI models.

## FAST-BREEDER REACTOR

— Officials have confirmed that India's prototype fast-breeder reactor in Tamil Nadu's Kalpakkam is expected to be commissioned next year, nearly two years after it got the go-ahead from the nuclear regulator.

— It will mark the second stage of India's three-stage nuclear programme that aims to recycle spent fuel to reduce the inventory of radioactive waste.



— The PFBR being developed in Kalpakkam is the first-of-its-kind nuclear reactor to use plutonium-based mixed oxide as fuel and liquid sodium as coolant. It will also utilise the spent fuel of Pressurised Heavy Water Reactors, which form the mainstay of nuclear power in India at present.

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#### TYPE 5 DIABETES

— The International Diabetes Federation (IDF) has officially recognised Type 5 diabetes as a distinct form of disease.

— Type 5 diabetes is a form of diabetes affecting lean and malnourished teenagers and young adults in low- and middle-income countries. It causes pancreatic beta cells to function abnormally, leading to insufficient production of insulin.

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#### KUMUDINI LAKHIA

— Celebrated Kathak dancer Kumudini Lakhia, 95, died recently. She was hailed for bringing group performances in Kathak, which was largely associated with solo renditions, to the mainstream.

— She was awarded the Padma Vibhushan on Republic Day in January 2023, was honoured with a Padma Shri in 1987, and the Padma Bhushan in 2010, besides several other national awards.



# DreamIAS



## BUSINESS AND ECONOMY

### HOW CHINA IS FIGHTING U.S. TARIFFS

In the three months since U.S. President Donald Trump launched his “America First” trade policy, weaponising trade to extract concessions from his partner countries, there are indications that it could bring the global economy to its knees. “Reciprocal tariffs” were proposed as a key component for eliminating what Mr. Trump perceived as “unfair trade practices” of partner countries.

But on April 9, the day this instrument was to take effect, President Trump did a turnaround and the implementation of “reciprocal tariffs” was postponed by 90 days for all 57 target countries, except China.

The objective of the U.S. administration is to compel its trade partners to negotiate bilateral agreements within the stipulated period, through which they offer concessions to American stakeholders. The Trump administration’s expectation is that trade partners would then be forced to reduce their trade deficits vis-à-vis the U.S., an overarching trade policy objective of the new President.

#### **A trade war**

China had declared right from the beginning, even as the U.S. President was laying down the contours of this aggressive trade policy, that it would challenge the decision to impose “reciprocal tariffs”. And as anticipated, China announced its decision to impose retaliatory tariffs equivalent to the 34% “reciprocal tariff” that it faced, in response to which Mr. Trump imposed an additional tariff of 50%, raising the overall tariff burden to 104%. China then escalated the trade war by imposing 125% tariffs on all its imports from the U.S., which led to the White House increasing tariffs again to 145%.

However, in the midst of this escalation, Washington tacitly admitted to the potential impact these tariffs would bring by exempting a number of critical electronic goods, including computers, laptops, smartphones, and semiconductor devices, from such tariffs, reflecting the overwhelming dependence of the U.S. on import of these products. There is still confusion about the same in the Trump administration, which was evident when Commerce Secretary, Howard Lutnick, informed that tariffs on electronics products would be included within semiconductor tariffs in a “month or two”, only to be contradicted by the President, who declared that these tariffs would be imposed sooner. The “America First” trade policy is causing much chaos, with its adverse implications impossible to gauge at this juncture.

Two sets of issues arise as Donald Trump’s trade war continues to hold the global economy to ransom. First, can the 90-day pause in the implementation of “reciprocal tariffs” provide the Trump team opportunities to stitch together at least a few agreements that would allow the “dealmaker” President to wax eloquent about his accomplishments? Secondly, what explains Xi Jinping’s extraordinary defiance against Donald Trump’s all-out attempt to corner Beijing? And more importantly, does Mr. Xi have a strong trump card with which he can effectively counter Donald Trump and his “America First” trade policy?





### The U.S.'s negotiating agenda

Though Donald Trump's decision to pause the implementation of "reciprocal tariffs" to push his trade partners to conclude bilateral deals made immediate headlines, the move was part of a strategy that the President's advisers had worked out well before he took office. Stephen Marin, chair of the U.S. council of economic advisers, had argued in a paper published immediately after Donald Trump's election as President that "tariffs create negotiating leverage for incentivising better terms from the rest of the world on both trade and security terms. America would encourage other nations to move to lower tariff tiers, improving burden sharing". Peter Navarro, senior counselor for trade and manufacturing, explained that the 90-day pause was "part of a calculated negotiating tactic", and "a demonstration of Trump's signature dealmaking style".

These explanations would no doubt be immensely satisfying for the President, but the question is whether trade deals can actually be re-negotiated with at least a few targeted countries. This seems improbable for at least two reasons. Under the Trump administration, the U.S.' negotiating approach has undergone a major change, as the de jure trade negotiator, the U.S. Trade Representative (USTR) is no longer in charge of negotiations. Peter Navarro revealed that Trump, "the boss, is going to be chief negotiator. Nothing is done without him looking very carefully at it." When the head of the government of the world's largest economy decides to micro-manage trade deals, it is possibly safe to conclude that negotiations would be a non-starter.

A second problem for the U.S. is that it has a gargantuan negotiating agenda, a peek into which was provided in a recent USTR report — the National Trade Estimate Report on Foreign Trade Barriers. This report highlights "significant foreign barriers to U.S. exports, U.S. foreign direct investment and U.S. electronic commerce" in India and 56 other countries. It identifies "unfair trade practices [undermining] U.S. exporters' competitiveness and, in some cases, [preventing] U.S./ goods from entering the foreign market entirely". It can, therefore, be argued that unless these "unfair trade practices" identified by the USTR are removed, the U.S. President's aspiration of "Making America Great Again" cannot be realised.

If Trump has to secure this grand bargain, India, for instance, would have to open its agricultural markets for U.S. agri-business, lower its agricultural subsidies, discontinue its public distribution system, and amend its Patents Act risking the future of India's generic pharmaceutical companies providing affordable medicines. India would also have to discontinue policies that the U.S. has repeatedly red-flagged, including data localisation, and regulations on genetically modified crops and dairy products. Would India and other targeted countries allow Donald Trump to coerce them into amending their laws and policies to "clinch" a trade deal?

### China's strategy

The most unexpected development following the launch of Trump's trade war has been China's retaliation. In his first term as President, Mr. Trump had forced China to ink an enforceable Economic and Trade Agreement in 2020, acceding to several of his demands. But over the past five years, the nature of the U.S.-China trade relationship has changed drastically, which could explain the push back from the world's second largest economy. In 2018, the U.S. was China's largest export market with a 19.2% share. But over the past six years, China reduced this figure to below 15% and in the first quarter of 2025, only 13.5% of China's exports reached the U.S. At the same time, China has diversified its export markets, with ASEAN emerging as the most significant destination. Several major economies, including India, Vietnam, and the Russian Federation, have seen an appreciable increase of the Chinese footprint in their economies. This is a remarkable



instance of hedging against risk, from the actions of an aggressive trade partner, which has enabled China so far to counter one of the worst trade-related escalations in modern history.

By diversifying its exports as a part of its defensive strategy, China is in a position to leverage its two significant strengths to force the hands of its aggressor. The first is China's control over the rare earth market, accounting for 92% of global output. China has already shown its hand by imposing export restrictions on seven types of rare earth minerals in the past few days.

A second advantage for China is its position as the second largest holder of U.S. Treasury bonds, but in recent years, it has been gradually selling its holdings. Since 2018, China has reduced its holdings from \$1.2 trillion (22% of the total) to \$761 billion (less than 9%) in January 2025 (see Charts). Though it seems unlikely at this juncture that China would take the risk of dumping its holding to challenge the U.S., any further escalation of the trade war can alter the situation.

Given this grave risk of economic disruption, major economies must coordinate their efforts to ensure that the U.S. President abandons unilateralism, and reposes his faith in multilateralism as the way forward.

#### TRADE SPAT FALLOUT: CHINA'S TIGHTENING OF CONTROL OF RARE EARTHS IS CHOKING OFF GLOBAL SUPPLIES AND UPENDING ELECTRONICS MANUFACTURING

China has suspended exports of a wide range of critical minerals and magnets, threatening to choke off supplies of components central to automakers, aerospace manufacturers, semiconductor companies and military contractors around the world.

- Shipments of the magnets, essential for assembling everything from cars and drones to robots and missiles, have been halted at many Chinese ports while the Chinese government drafts a new regulatory system. Once in place, the new system could permanently prevent supplies from reaching certain companies, including American military contractors.
- The official crackdown is part of China's retaliation for President Trump's sharp increase in tariffs that started on April 2.
- On April 4, the Chinese government ordered restrictions on the export of six heavy rare earth metals, which are refined entirely in China, as well as rare earth magnets, 90 percent of which are produced in China. The metals, and special magnets made with them, can now be shipped out of China only with special export licenses.
- But China has barely started setting up a system for issuing the licenses. That has caused consternation among industry executives that the process could drag on and that current supplies of minerals and products outside of China could run low.
- If factories in Detroit and elsewhere run out of powerful rare earth magnets, that could prevent them from assembling cars and other products with electric motors that require these magnets. Companies vary widely in the size of their emergency stockpiles for such contingencies, so the timing of production disruptions is hard to predict.
- The so-called heavy rare earth metals covered by the export suspension are used in magnets essential for many kinds of electric motors. These motors are crucial components of electric cars, drones, robots, missiles and spacecraft. Gasoline-powered cars also use electric motors with rare earth magnets for critical tasks like steering.



- The metals also go into the chemicals for manufacturing jet engines, lasers, car headlights and certain spark plugs. And these rare metals are vital ingredients in capacitors, which are electrical components of the computer chips that power artificial intelligence servers and smartphones.

**Do You Know:**

- Rare earth magnets make up a tiny share of China's overall exports to the United States and elsewhere. So halting shipments causes minimal economic pain in China while holding the potential for big effects in the United States and elsewhere.
- Most but not all rare earth magnets include heavy rare earths, which are needed to prevent magnets from losing their magnetism at high temperatures or in some electrical fields. Some rare earth magnets are made only from light rare earths, and are not subject to export restrictions.
- Until 2023, China produced 99 percent of the world's supply of heavy rare earth metals, with a trickle of production coming out of a refinery in Vietnam. But that refinery has been closed for the past year because of a tax dispute, leaving China with a monopoly.
- China also produces 90 percent of the world's nearly 200,000 tons a year of rare earth magnets, which are far more powerful than conventional iron magnets. Japan produces most of the rest and Germany produces a tiny quantity as well, but they depend on China for the raw materials.
- The world's richest deposits of heavy rare earths lie in a small, forested valley on the outskirts of Longnan in the red clay hills of Jiangxi Province in south-central China. And most of China's refineries and magnet factories are in or near Longnan and Ganzhou, a town about 80 miles away. Mines in the valley ship ore to refineries in Longnan, which remove contaminants and send the rare earths to magnet factories in Ganzhou.

**WILL TRUMP'S TARIFFS BRING IN A RECESSION?**

The U.S. has been the greatest champion of free trade and the chief architect of globalisation since the middle of the 20th century. However, in a stunning reversal of roles, U.S. President Donald Trump unleashed a carpet bombing of the global trading system on April 2, which he declared as "Liberation Day".

The U.S. tariff, or the tax America levies on imports from other countries, was 2 to 3% for two decades until 2024 (Chart 1). However, President Trump declared on April 2 that the U.S. would henceforth be charging a minimum of 10% tariff on all its imports. Imports from about 60 countries will have a significantly higher-level tariff — which is being described as "reciprocal" tariffs. These include tariffs of 20% on the European Union (EU), 27% on India, and 46% on Vietnam.

Tariffs of 25% were imposed in February itself on Mexico and Canada, the U.S.'s neighbours and two of its largest trading partners. But the biggest jolt has been the tariff imposed on China, which supplies one-sixth of all foreign goods the U.S. consumes. Imports from China to the U.S., as of April 11, will now face tariffs of 145%.

The markets recoiled with horror at the scale of the tariff increases and their uncertainty. Stock markets nosedived. China has retaliated, returning each tariff blow with equal ferocity. It has imposed 125% tariffs on imports from the U.S. There is a distinct possibility that the U.S. and the world are heading towards a painful economic recession. On April 9, President Trump reversed



some of his decisions, announcing a 90-day pause on “reciprocal” tariffs for most countries while insisting that the steep tariffs on China would take immediate effect.

A commodity with a price tag of \$100 imported from (say, Vietnam) would have cost \$103 in the U.S. market if tariffs were 3%. However, the same good must be purchased for \$146 when the newly announced tariffs take effect. Tariffs protect domestic industries from foreign competition but may lead to price increases.

### **‘Make America Great Again’**

With its high per capita income and low tariffs, the U.S. has been the largest export market for goods from cars to computers, aiding the creation of manufacturing jobs in several countries. In 2022, China exported goods worth \$576 billion to the U.S., but the U.S., in return, could sell only \$154 billion worth of goods to China (Table 2). Overall, the U.S. had a trade deficit of \$1,311 billion, or 5% of its gross domestic product (GDP), in 2022. America has managed to continue buying more from the world than what it sells because of the dollar’s position as the dominant international currency. That is primarily thanks to China, which continues to back dollar-denominated assets, storing significant portions of its large export surpluses in U.S. treasury bonds. Such a mutually beneficial relationship between the two largest economic powers has been the key driver of the globalisation of trade and finance since the 2000s.

However, globalisation creates inequalities not only in the developing but also in the developed world. In the U.S., sectors such as steel and automobiles have been among the most hit by import competition.

The resentment of the workers in these sectors — many of whom are white, middle-aged men — has been one of the factors that helped propel Mr. Trump to the U.S. presidency in 2016 and again in 2024. President Trump has promised to revive U.S. manufacturing, protecting it from competitors who, in earlier years, were allowed to “rip off” America with their imports.

Without a doubt, President Trump is playing with fire. With the higher tariffs, prices of most goods, especially consumer goods, will move upward, inflicting pain on ordinary Americans. It is doubtful if American firms can lift their production capabilities to serve at least a part of the demand created for them by making imports costlier.

### **China’s gamble**

China has vowed to “fight till the end” in what may turn out to be a prolonged and bitter trade war. Such bravado is backed by the fact that China has been quietly preparing for such a showdown for over a decade, gradually reducing its dependence on the U.S. economy. The proportion of exports to GDP has declined steeply in China, from 35% in 2012 to 19.7% in 2023. As a proportion of its total exports, China’s exports to the U.S. have fallen, too, from 21% in 2006 to 16.2% in 2022. China has invested hugely in science, technology, and innovation, particularly in artificial intelligence and electric cars. This has been done partly in response to the U.S.’s restrictions on technology transfer to China. China bypassed U.S. tariffs earlier by shifting production to its East Asian neighbours (especially Vietnam), with which it built deep economic networks.

### **India’s options**

President Trump calls India a ‘tariff king’, referring to the marked increase in India’s tariffs since 2018. The biggest chunk of India’s exports is sold to the U.S. (\$91 billion in 2022), and they are critical for meeting the country’s large import bill. Therefore, any reduction in India’s export





earnings following tariff escalation will be keenly felt. At the same time, as exports form a relatively small share (21.8%) of its GDP, the impact of the tariff increases may be less in India than in many other countries. Also, there has been no increase in tariffs on pharmaceuticals and services, two of India's major export items to the U.S.

The narrowness of its manufacturing capabilities is the biggest hurdle for India. Tariff protection and the Production Linked Incentive Scheme have not been sufficient to revive this sector. India needs a clear-cut industrial policy and a resurgence in investments to escape the unfolding global turmoil.

#### FIRING AT US FED, TURMOIL IN MARKETS

The US Federal Reserve is in an unenviable position, confronted with challenges on both its mandates — ensuring price stability and maximum employment. President Donald Trump's tariff policies have raised the spectre of higher inflation, along with weaker economic momentum and higher unemployment at the same time. This complicates the Fed's monetary policy decisions — Fed chair Jerome Powell has also acknowledged that. On Wednesday, speaking at the Economic Club of Chicago, he said, "We may find ourselves in the challenging scenario in which our dual-mandate goals are in tension." Powell further said that the "effects of that (the Trump administration's policy changes) are likely to move us away from our goals, so unemployment is likely to go up as the economy slows in all likelihood, and inflation is likely to go up as tariffs find their way" into the economy.

A day later, the Fed chairperson came under severe criticism from the US President. On Thursday, Trump wrote on a social media platform: "Too Late' Jerome Powell of the Fed, who is always TOO LATE AND WRONG, yesterday issued a report which was another, and typical, complete 'mess'... Powell's termination cannot come fast enough!" This is not the first time that Trump has criticised the Fed. In March, when the central bank had decided to hold rates steady, Trump had posted: "The Fed would be MUCH better off CUTTING RATES as US Tariffs start to transition (ease!) their way into the economy. Do the right thing." The threat of "Powell's termination" because of disagreements with the President sends worrying signals about the independence of the US Fed. Central bank independence is a cherished asset. Unlike politicians who tend to be driven by short-term political considerations, independent central banks, taking a longer view, can take tough and unpopular decisions that may deliver short-term pain. Former US Fed chairperson Ben Bernanke had once cautioned that "political interference in monetary policy can generate undesirable boom-bust cycles that ultimately lead to both a less stable economy and higher inflation".

These developments come at a time of uncertainty in markets. US treasuries — considered to be a safe haven during periods of uncertainty — had sold off recently. Alongside, the US dollar has weakened. On Monday, former US treasury secretary Janet Yellen said that the movement in the bond market was "suggestive of a loss of confidence in US economic policy". Any attempt to undermine the independence of the central bank will only add to the uncertainty and turmoil in the markets and the economy.

#### 'TRADE TURMOIL'S OIL MARKET BITE IS ALREADY LEAVING LASTING SCARS'

Nimble U.S. oil producers are responding quickly to the economic turmoil sparked by President Donald Trump's trade war by slowing down drilling activity, while larger firms are rethinking big-ticket projects. This means short-term tariff drama could have long-term consequences for the U.S. oil industry.



American shale drillers, particularly in the Permian basin, have upended oil markets during the past 15 years, catapulting the United States into its current position as the world's largest oil producer.

But they are now running into an impasse. These technology-driven frackers require a relatively high oil price to expand production, between \$60 to \$71 a barrel, as per a recent survey of 130 producers conducted by the Dallas Federal Reserve Bank.

The benchmark U.S. oil price currently sits at \$63 a barrel, following a 9% drop since Mr. Trump's tariff announcement on April 2. And the gap is most likely even wider than it initially appears because the imposition of 25% tariffs on steel and 10% levy on other drilling equipment will almost certainly push up breakeven prices.

#### HOW TO READ CHINA'S BETTER-THAN-EXPECTED GROWTH FIGURES

At a time when China is fast becoming the primary target of United States President Donald Trump's punitive tariffs, the latest economic growth data have provided some relief to Beijing. China's gross domestic product (GDP) grew by 5.4% in the first quarter of 2025, according to a press release by the country's National Bureau of Statistics (NBS).

- In other words, China's GDP in the months of January, February and March (2025) was 5.4% more than the GDP in the same three months of 2024. This growth exceeded the expectations that most analysts had; most street forecasts varied between 4.9% and 5.2% growth.
- China's better-than-expected growth comes at a crucial time. The chart alongside shows that China's GDP was about a tenth of the US GDP until around the turn of the century. But in the following years, especially since 2003, the Chinese economy grew fast and rapidly closed the gap with the US economy, the biggest economy through this period.
- However, after 2021, when its economy was around 75% the size of the US economy, China started to lose ground relative to the US. Between 2021 and 2024, while the US economy grew from an annual nominal GDP of \$23.6 trillion to \$29.1 trillion, Chinese annual GDP could only rise from \$17.8 trillion to just \$18.2 trillion. Put simply, over the past four years, the US has extended its lead over China, its closest rival.
- This has happened at a time when, led by the US, the rest of the world has tried to adopt a China + 1 strategy, which essentially refers to reducing the dependence on China. This has also been a time when the US has tried to contain China's rise through direct legislation such as the CHIPS (Creating Helpful Incentives to Produce Semiconductors) Act.

#### Do You Know:

- Beyond such geo-political measures, China has also suffered from internal problems such as a slowdown in the real estate market — a development that threatened to stall the Chinese economy.
- The collapse of Evergrande Group, which was once China's largest property developer, between 2021 and 2024 is a case in point. Evergrande reportedly had unpaid debts over \$300 billion.
- Owing to the domestic slowdown and in anticipation of the growing attacks on the trade front from the US, policymakers in China have been providing both fiscal and monetary stimuli.



- On the monetary side, since September 2024, the People's Bank of China (the central bank, like the RBI in India) has slashed interest rates to incentivise economic activity. In particular, it has asked commercial banks to cut interest rates on real estate mortgages to reignite interest in the property market.
- China has said the GDP growth numbers show that the national economy was “off to a good start” and “the high-quality development was advancing with new and positive momentum”.
- The Chinese economy is likely to face greater constraints as a full-blown trade war with the US takes effect. In order to make up for the fall in demand for its goods — thanks to prohibitive levels of tariffs — its policymakers will have to boost domestic demand as well as find ways to sell its goods in the rest of the world. In this context, closer trade ties with Europe will be critical, not to mention finding ways to arrive at a deal with the US.

### SHAPING A RESPONSE TO THE U.S.'S RECIPROCAL TARIFFS

President Donald Trump's announcement of reciprocal tariffs has come as a shock, though it is not a surprise. The new tariffs consist of two parts: the existing commodity-wise import tariff and an additional reciprocal country-wise common tariff for all goods. The resultant tariffs are country-wise as well as commodity-wise. The reciprocal tariffs announced are now on hold and limited to 10% for 90 days, except for China.

#### Calculation of reciprocal tariffs

The calculation of the reciprocal country-wise tariff is based on the following formula:

$$\text{U.S. discounted tariff rate} = (-1) * (1/2) * (\text{exports from U.S.} - \text{imports to U.S.}) / \text{imports to U.S.}$$

The parametric assumptions are such that no individual tariff or import demand elasticities appear in this formula. The formula in substance is not the way to determine the tariff rate. In addition, the table presented by Mr. Trump has a column 'charged to the US'. This is misleading. This is not the tariff rate imposed by various countries. It is simply double the discounted reciprocal tariff rate. India's reciprocal tariff is worked out below using magnitudes of exports and imports in billion dollars for 2024.

$$\text{India's discounted reciprocal tariff rate} = (-1) * (1/2) * (41.8 - 87.4) / 87.4 = 26.1\% = 26\%$$

This penal tariff rate is to be added to the tariff that is presently applicable for various commodities. The 26% rate would be a common additional element for all commodities. For countries that are not listed in the reciprocal tariff list, a floor rate of 10% has been announced. This will be added to their individual commodity-wise tariff rates.

Some commodities have been presently exempted from the levy of the additional discounted reciprocal tariff. These include steel/aluminum articles, autos/auto parts, copper, pharmaceuticals, semiconductors, lumber articles, bullion and energy and certain other minerals that are not available in the U.S..

#### Calibrating India's response

We need to explore now what our reactions should be. As indicated in the Table, India's total exports of goods and its exports to the U.S. as a percentage of GDP are moderate.



India's exports to the U.S. are not only quite low but have also been falling in recent years. The impact of the additional 26% tariff would be small but different for different exported goods. India is certainly not a country that is heavily dependent on exports.

An analysis of major exports to the U.S. in terms of their share in total exports to the U.S. indicates that the main Indian exports that would be affected by the imposition of the additional 26% tariff would be electrical machinery, gems and jewellery, machinery and mechanical appliances, mineral fuels and articles of iron and steel. Pharmaceuticals are not yet subject to the additional tariff. Mineral fuels are refined oil products that are re-exported to the U.S. after processing in India. The impact on gems and jewellery is likely to be minimal as its demand is relatively inelastic. The main items that would therefore be affected include electrical machinery, machinery and mechanical appliances and made-up textiles. However, India's competitors in these three commodity groups such as China, Vietnam, Cambodia and Bangladesh have also been subjected to reciprocal tariffs which are higher than that of India. South Korea is also a competitor in electronic goods but has been subjected to a 25% reciprocal tariff, which is very close to that of India.

Some countries such as China have started levying reciprocal tariffs. However, this has elicited an aggressive response from the U.S., resulting in a revised overall tariff rate for China at 145%, which has been raised up to 245% for certain commodities. From India's angle this is not a good approach.

India's approach must be multi-pronged. An analysis of the major imports of India from the U.S. indicates that most of these are 'essentials'. Any levy of additional tariffs on them will make them more expensive. If India increases its imports from the U.S. wherever possible and advantageous, the penal reciprocal tariff rate on India will come down. For example, in the formula described above, if we increase the magnitude of India's imports from the U.S. by \$25 billion, say, by substituting the import of petroleum from other sources to the U.S., India's reciprocal tariff rate will come down to 11.8%, just above the floor rate of 10%, making India far more competitive. This does not affect India's overall current account deficit. This results only in a change in the composition of India's oil imports basket. This may be even desirable. India should speed up consultations with the U.S. trade authorities to work out a comprehensive trade arrangement taking into account the concerns of both countries. In the meanwhile, we should also watch out for 'dumping' in India by other countries such as China which are seriously affected.

#### **WTO must take the lead**

It is clear that the U.S. tariff initiative is only its opening gambit. Global trade and tariff structures would remain subject to considerable uncertainties in the near to medium term, which are bad for world trade and growth. As we move forward, we need to create a world trading system marked by low tariffs. The World Trade Organization should move strongly in this direction. Regional groupings are only a 'second best' solution which, however, must be pursued.

### **INDIA'S EXPORTS TO AMERICA, IMPORTS FROM CHINA REACH ALL-TIME HIGH IN 2024-25**

The concerns over reciprocal tariffs kicking off on April 2 seem to have resulted in a front-loading of shipments in March, with total exports to the US reaching an all-time high of \$86.51 billion in 2024-25.





- According to provisional trade data released by the Commerce Ministry, imports from China also surged to a record high of \$113.45 billion in the last financial year. Indian exporters shipped goods worth over \$10 billion to the US in March alone, which represents a sharp jump of 35 per cent compared to March last year. Overall, total goods exports remained flat.
- Simultaneously, imports in the same month from China jumped 25 per cent. This is much higher than the overall 11.52 per cent increase in imports recorded during FY25. Overall trade deficit was recorded at \$94.26 billion, as imports also grew by 7 per cent to hit a record of \$915.19 billion in the last financial year.
- The data showed that goods exports remained flat at \$437.42 billion in FY25, compared to \$437.07 billion during the previous financial year.
- India maintained a healthy surplus in services trade, with imports in FY25 coming in at \$195.95 billion. Former trade officer and head of think tank Global Trade Research Initiative (GTRI), Ajay Srivastava, said that India's trade deficit with China has hit \$99.2 billion in FY25, reflecting deeper structural dependencies, not just trade imbalances.
- "China is India's top supplier in all eight major industrial product categories. The PLI schemes are fuelling import growth due to their heavy reliance on imported components. What's more alarming is that India's exports to China fell 14.5 per cent, dipping to \$14.2 billion — now lower than they were in FY14, when the rupee was significantly stronger. This signals more than a trade issue; it's a competitiveness crisis," he said.

#### Do You Know:

- According to the Investopedia, Gross domestic product (GDP) is a broad measurement of a nation's overall economic activity. Imports and exports are important components of the expenditure method of calculating GDP. The formula for GDP is:  
$$GDP = C + I + G + (X - M)$$

where:

C=Consumer spending on goods and services

I=Investment spending on business capital goods

G=Government spending on public goods and services

X=Exports

M=Imports

—Exports minus imports ( $X - M$ ) equals net exports in this equation. The net exports figure is positive when exports exceed imports. This indicates that a country has a trade surplus. The net exports figure is negative when exports are less than imports. This indicates that the nation has a trade deficit.

- Both imports and exports are experiencing growth in a healthy economy. A balance between the two is key.
- The trade deflection is the redirection of trade flows from the third-country partner that has a higher external tariff, whereas trade diversion is the redirection of trade flows from third-country that has a lower external tariff.



## MISSING THE TARGET

India's industrial production growth slowed to a six-month low in February to 2.9%, down from January's 5.2% (revised estimates) and almost halved from last February's 5.6%. This decline was broad-based, except for a marginal rise in power production of 3.6%, up from January's 3.4%, but less than half of last February's 7.6%. While mining witnessed the steepest decline to 1.6% this February, from 8.1% last year, manufacturing almost halved to 2.9%, from 4.9% last year. From a use-based classification, the steep decline in consumer durables output to 3.8%, from 12.6% last February as well as a production contraction for the third month in a row, of consumer non-durables by 2.1% (there was a 3.2% contraction in January), indicates a marked decline in overall consumption demand. This has been despite a sharp dip in retail inflation, which was down to 3.61% this February from 5.09% a year ago, with a low food inflation rate at 3.75%, the lowest in two years. This makes it almost certain that the government's wish for a Maha Kumbh-led spike in consumption has not materialised, leading to the likelihood of the Centre's 6.5% GDP growth target for the 2025 fiscal being missed. February's Index of Industrial Production (IIP) numbers co-relate with the 14-month low in the manufacturing Purchasing Manager's Index survey conducted by S&P at 56.3.

This highlights two things: the trepidation of manufacturers facing unprecedented global economic uncertainty following U.S. President Donald Trump's actions and the lack of an appetite among consumers, many of whom have witnessed the value of their assets plummet due to Indian stock market volatility that has mirrored the peaks and troughs in global exchanges. There have been green shoots, however. Within the manufacturing sector, which has the highest weightage of about 77% in the IIP, 14 of 23 industry groups recorded growth this February from a year ago. Growth was led by motor vehicles, trailers and semi-trailers (8.9%), non-metallic mineral products (8%) and basic metals (5.8%). Capital goods output accelerated to 8.2% from 1.7% last year, indicating robust investment demand aided by a massive rise in government spending. This was despite the liquidity squeeze in India's banking system by ₹1.7 trillion, as on February 20, due to the massive flight of foreign capital in search of haven asset classes and to hedge against a depreciating rupee. The central bank stepped in by injecting about ₹2.18 trillion into the banking system using rupee/dollar swap arrangements that ended on March 24. The Centre can perhaps take solace in the fact that despite a possibility of its growth target for the last fiscal being missed, India remains the fastest growing economy.

## HOW RBI IS PROPOSING TO STREAMLINE RULES OF LENDING AGAINST YELLOW METAL

### The story so far:

The Reserve Bank of India (RBI) on April 9 put out draft guidelines for consultation on how lending against gold jewellery and ornaments as collateral should be conducted. The norms strive to harmonise the overall regulatory framework which may differ for entities with varied risk-taking capabilities and address concerns relating to their present conduct.

The banking regulator is soliciting comments on the draft until May 12.

### Standard framework

The central objective of the proposed norms is to enable a standardised framework which would help address issues emanating from lack of proper due diligence in the realm and improper assessment of the value of gold.



The apex banking regulator in September last year had expressed its disquiet about how loans were being disbursed through business models that had regulated entities partnering fintech platforms and/or other financial service providers. Concerns existed about the value of the metal being assessed in the absence of the borrower and outsourcing of essential procedures as credit appraisal, valuation and KYC of customers to the partner entity, among other things.

Gold loans essentially provide money to interested borrowers for their immediate or long-term needs by pledging the yellow metal. Its essential value makes it an ideal collateral which is auctioned off in case the loan is not repaid. However, the regulator observed instances wherein the average realisation from auctioning the gold was lower than the initially estimated value of the precious metal when the loan was disbursed. This was because of an incorrect assessment of net purity and/or weight.

The regulator also had concerns about entities not having verified the end use of the loans against their stated purpose thus being unable to correctly assess associated risk and place proportionate risk weights.

Imperative to note here that loans against gold jewellery have increased more than 87% on a year-over-year basis at the end of February. Furthermore, the Finance Ministry informed Parliament earlier this year that gross non-performing assets (GNPAs) concerning gold loans in Scheduled Commercial Banks and upper- and middle-layer non-banking financial companies have increased by 18.14% between March and June last year.

#### **Addressing lacuna**

The proposed norms introduce specific yardsticks for valuing the gold and disbursing the loan.

Firstly, the yellow metal would have to be valued against the price of 22-carat gold. The reference price could be the average of the preceding 30 days or the closing price of the preceding day as quoted by the Indian Bullion and Jewellers Association Ltd., or the spot price of gold in SEBI-regulated commodity exchanges. The RBI also proposes hallmarked gold be given preferential treatment with margin and interest rates set accordingly.

Also, the RBI proposes aggregate weight of silver and gold ornaments and jewellery must not exceed 1 kg per borrower. As for coins, the aggregate weight cannot exceed 50 gm for gold coins for a single borrower and 500 gm for silver coins. Coins sold only by banks will be considered for valuation. Finally, the RBI proposes to mandate lenders do not extend loans where ownership of metal is doubtful.

#### **Multiple loans?**

No, the RBI specified eligible gold collateral irrespective of value cannot be used concurrently for extending loans meant for income generating purposes and for personal consumption. In fact, the regulator also proposes to specify that lender do not extend loans against re-pledged collateral. RBI seeks the borrowed money must be utilised for the purpose for which it was sought.

According to Anand Mihir, financial services risk consulting leader at EY India, this would help improve the paradigm for risk assessment for lenders and avert borrowers' over-leveraging of same collateral.



### Loan size framework

Yes, the more notable specification introduced in the framework entail that the loan to value ratio (LTV) against gold collateral cannot exceed 75% of its value. LTV ratio refers to the quantum of money a borrower can receive based on their pledged gold. This would apply to all NBFCs.

The RBI has sought that the ratio be maintained on an ongoing basis throughout the tenor of the loan.

More importantly, the draft seeks if the breach exists at date of maturity, no renewal would be allowed.

### Bad news for NBFCs?

Shares of all major NBFCs, such as Muthoot Finance, IIFL Finance and Manappuram Finance slid when the draft proposal was published last Wednesday.

Concerns primarily emanated on two fronts, viz. increased cost of compliance and impact on assets under management (AUMs). For perspective, as per brokerage platform Groww, gold loans constitute a significant portion of the firms' AUMs. For Muthoot Finance, it stands at 98%, Manappuram Finance 50% and IIFL Finance 21%. Mr. Mihir maintains the LTV threshold is unlikely to significantly impact the sector.

George Alexander Muthoot, MD, Muthoot Finance welcomed the "thoughtful and timely step" towards creating a robust framework for the sector.

## URBAN CONSUMERS ARE WORRIED ABOUT THEIR INCOME LEVELS

This March, while a significant share of urban consumers remained optimistic about job opportunities, many continued to be pessimistic about income levels. This suggests that although jobs are available in urban areas, income growth has stagnated. Notably, pessimism around income levels is even more pronounced in rural areas.

Moreover, a majority of urban consumers said that commodity prices have risen compared to a year ago and, as a result, their spending has increased. Coupled with stagnant incomes, this has led to a greater share of urban consumers feeling pessimistic about the overall economic situation of the country despite improved sentiment regarding employment.

Urban perceptions are drawn from a Reserve Bank of India (RBI) survey conducted between March 1 and 10, 2025, covering respondents from 19 major cities. Rural perceptions are based on the first edition of a separate RBI survey, which gathered responses from households in rural and semi-urban areas across the country in the same period.

In March, 35.5% of urban respondents had said that their employment scenario had improved compared to a year ago, maintaining almost the same level recorded in the last one year.

Only 23.8% urban respondents claimed that their income levels have increased compared to a year ago — close to 12% points less than those who said that the job outlook has improved.

The steady recovery in perceptions about income levels, since the pandemic-related peak pessimism, saw a reversal in March 2024. From that month, optimism about income levels started





to dip again. This negative trend persisted into March 2025 as well, with fewer than one in four urban respondents reporting any improvement in their income levels.

It suggests that while a decent number of jobs are available in urban areas, income levels remain largely stagnant, as noted earlier.

Across all surveyed months, a consistently higher proportion of rural respondents expressed pessimism about their income levels compared to their urban counterparts. In March this year, 29.9% of rural respondents said that their income levels have declined compared to a year ago, higher than the 23.3% who said the same in urban areas.

Rising prices have led to higher spending. However, income levels are stagnant. This suggests that many urban residents may be struggling to make ends meet despite retaining their jobs. This had an effect on the overall economic perception of urban residents. Only 34.7% of them said in March that the overall economic situation has improved this year, compared to last year. This is the lowest such share of respondents in over a year.

#### GOOD NEWS, AND BAD

India's March retail inflation was down to a near six-year low of 3.34%, making it almost certain that the Reserve Bank of India (RBI) will cut its banks' lending rate further over the next few Monetary Policy Committee meetings. The repo rate has already been cut twice in a row, by 25 basis points (bps) each, in February and April, bringing it down from 6.5% to 6%, signalling the emphasis on growth, amid global trade uncertainties, as the RBI's concern over non-core inflation eases. Vegetable prices have plummeted over the past four months from the highs of October 2024, when food inflation peaked at 10.87%, the highest since November 2013. Food inflation in March fell to 2.69% aided by a contraction in the prices of vegetables (-7.04%), eggs (-3.16%) and pulses (-2.73%). The repo rate reduction has already begun translating into lower interest on bank loans. In normal times, this would translate into greater capital flows into businesses, thereby raising jobs, incomes and consumption. But it comes at a time of dampening investor confidence: U.S.-led tariff uncertainty is forcing exporters to scramble for newer markets, amid a concern over near-term demand contraction, as America has been India's largest buyer of merchandise goods since fiscal year 2022. Easing inflation could raise domestic consumption and India's sluggish industrial production.

What must concern policymakers more should be the steep fall in food prices, as this means lower farmer incomes, directly impacting rural consumption demand. Last December, the government procured eight tonnes of tomatoes in Kurnool, Andhra Pradesh, as prices in the local market plummeted to ₹1 a kilogram. In February this year, in Maharashtra and Madhya Pradesh, an 80% fall in tomato prices forced farmers to dump produce or use them as cattle feed. A 2022 study by the Ministry of Food Processing pegged India's post-harvest loss at a whopping ₹1.52 trillion annually, ranging between 6% to 15% of produce depending on the crop and region. This is due to widespread shortages in cold storage facilities and temperature-controlled transport for perishables, and market inaccessibility for farmers. A significant 86% of Indian farmers make a living from less than two hectares of land. A 2021-22 NABARD survey pegged average monthly agricultural household income at ₹13,661. A more comprehensive NSSO 2019 survey estimates this to be ₹10,218. These figures are lower than those in other emerging economies such as China, Mexico and Brazil for the corresponding years. While rural consumption has been rising since the COVID-19 pandemic years, monthly per capita consumption expenditure for rural areas in fiscal



2024 was ₹4,122, while in urban areas, it was ₹6,996, indicating the significant gap that must be viewed as an opportunity, at a time when export growth is expected to be sluggish.

#### STUDY: SURAT PARTICULATE EMISSIONS MARKET CUT POLLUTION IN INDUSTRIES BY UP TO 30%

The world's first-ever market for trading in particulate matter emissions—launched in Gujarat's Surat in 2019 through partnerships with the University of Chicago, Yale University, and the Abdul Latif Jameel Poverty Action Lab (J-PAL)—has reduced pollution by 20-30% among participating industries while lowering their compliance costs, according to a recent study published in The Quarterly Journal of Economics.

- The Surat Emission Trading Scheme (ETS) seeks to curb air pollution by allowing plants to buy and sell permits for particulate matter emissions to stay within a fixed pollution limit.
- Each plant is given a limit on how much it can pollute. Those that stay within the limit can sell their unused permits to others that exceed theirs. This approach, known globally as a cap-and-trade system, has been used in Europe for greenhouse gases and in China for carbon emissions.
- The Surat ETS is run by the Gujarat Pollution Control Board (GPCB) in collaboration with the Energy Policy Institute at the University of Chicago (EPIC), J-PAL, and industry associations. Surat was chosen for the pilot market as it is a highly industrialised city where industrial pollution contributes nearly a third of the ambient particulate matter, the study notes.
- A cluster of industrial plants in Surat traded permits on a platform hosted by the National Commodities and Derivatives Exchange e-Markets Limited (NeML). Plants that failed to comply with emission caps or permit requirements were fined.

#### Do You Know:

- The GPCB issued about 80% of the emissions cap in free permits, distributed in proportion to a plant's emissions potential (e.g., boiler size), while the remaining 20% were auctioned weekly. Plants that failed to acquire sufficient permits to meet their caps were fined.
- Launched in Surat, the Emissions Trading Scheme (ETS) is a regulatory tool that is aimed at reducing the pollution load in an area and at the same time minimising the cost of compliance for the industry.
- The Emissions Trading Scheme (ETS) is a market in which the traded commodity is particulate matter emissions. The Gujarat Pollution Control Board (GPCB) sets a cap on the total emission load from all industries. Various industries can buy and sell the ability to emit particulate matter, by trading permits (in kilograms) under this cap. For this reason, ETS is also called a cap-and-trade market.

#### HOW CAN V2G TECHNOLOGY HELP INDIA'S POWER SECTOR?

##### The story so far:

The Kerala State Electricity Board (KSEB) and the Indian Institute of Technology Bombay (IIT Bombay) have initiated a pilot project to explore the implementation of Vehicle-to-Grid (V2G)



technology across the State. This collaboration aims to assess the feasibility of integrating Electric Vehicles (EVs) into the State's power grid.

#### **What is V2G?**

V2G refers to technologies that enable EV batteries to send power back to the grid. When an EV is not in use, it can act as a decentralised battery energy storage device. An idle EV, when connected to a bi-directional charger, can provide support to the distribution grid. By incorporating V2G technologies, EVs offer an opportunity to facilitate the integration of Renewable Energy (RE) and support a demand response market. Technologies for integrating an EV to the grid will need to consider both the charging and discharging of EV batteries. In the first case, there is a transfer of power from the grid to the vehicle (G2V) to charge the vehicle. And in the second case, an EV functions as a distributed energy source where it can provide power based on the requirement of the grid. Overall, the ability of EV batteries to transfer power encompasses many possibilities such as V2G, Vehicle to Home (V2H), Vehicle to Vehicle (V2V) etc. Among these, V2G is the most popular use case.

#### **Is V2G being applied globally?**

V2G technologies have gained significant traction in mature EV markets such as Europe and the U.S. EVs have emerged as a cost-effective form of distributed energy storage, with owners incentivised to supply power back to the grid. In the U.K. and The Netherlands, EV owners are compensated for supplying excess energy back to the grid during peak hours. In places like California, EV users are actively encouraged to participate in the ancillary services segment of the electricity market, helping improve grid stability and reliability. Under this market mechanism, the compensation is high enough to encourage EV users to offer services during periods of variation in RE generation. EVs are also an important decentralised storage resource, serving as an emergency power resource. With increasing climate-linked disasters, V2G must be encouraged.

#### **What's the situation in India?**

In India, V2G integration is currently in a nascent stage. The response to growing EV sales largely focuses on planning of the distribution grid with integration of EV charging infrastructure. A few DISCOMs have planned pilot projects for smart charging and V2G integration. The Central Electricity Authority (CEA) has set up a committee to frame guidelines for reverse charging, that is, from batteries to the grid. This committee highlighted smart charging as a key enabler to ensure EV growth with minimal impact on the grid. However, the electricity market structure in India is not the same as in the U.S. or Europe, and the current structure is not suited for decentralised solutions like EVs to send power back to grid. This is due to challenges that arise from the variable nature of RE and mismatches between electricity supply and demand. To mainstream V2G, supportive regulatory changes are needed.

#### **What is KSEB-IIT Bombay project?**

Kerala is currently experiencing a rapid adoption of EVs, and KSEB has taken several steps to support EV charging. The increased electricity demand for charging has resulted in concerns about evening peak demand. There has also been an exponential growth in rooftop solar adoption. The project plans to assess an EV's ability to support the grid during peak demand when solar energy is not available.



## WHY ARE WOMEN MISSING FROM THE FACTORY FLOORS?

One of the drivers of Viksit Bharat will be manufacturing. One of the pillars of Viksit Bharat is 'nari (women)'. However, women are missing from the factory floors. The share of women in India's formal manufacturing sector fell from 20.9% in 2015-16 to 18.9% in 2022-23 (1.57 million out of 8.34 million formal workers). What is even more striking is that of all the women working in manufacturing, Tamil Nadu alone is employing 41%.

In informal manufacturing, women form 43% of the workforce. Therefore, it is not the case that women are not working, but that they are not getting the "better" jobs. This again points to informalisation and the low paying nature of jobs held by women.

Manufacturing contributes almost one-fifth of India's GDP. It is poised to be a key growth driver for India. Yet the participation of women in this sector remains low. Compared to other developing economies such as Bangladesh and Vietnam, India lags behind.

Tamil Nadu, which employs the largest chunk of the formal female workforce, and four other States make up almost three-quarters of India's total. This implies that five States are responsible for most of the formal female manufacturing workforce. Similarly, West Bengal, Uttar Pradesh, Tamil Nadu, and Maharashtra contribute close to 50% of the informal women workforce in the manufacturing sector.

Bihar, West Bengal, Chhattisgarh, and Haryana have the highest gender gap in the formal manufacturing workforce, with women making up less than 6% of the workforce. Moreover, even highly industrialised States such as Gujarat, Maharashtra, and U.P. have a high gender disparity in the formal manufacturing sector. Women make up less than 15% of the workforce in these States.

There is significant homogeneity across industries in which women are employed within the formal and informal sector. For instance, within the formal sector, 60% are employed in textile, wearing apparel, and food processing. Within the informal sector, wearing apparel and tobacco sectors are the major employers of women.

Within the formal sector, tobacco is the only industry where more women than men are employed. In the informal tobacco industry, more than 90% are women. Thus, women in India are mostly concentrated in the informal sector, which is low paying and offers a poor standard of working. Therefore, it is important to transition women from the informal to the formal sector to ensure a decent pay and work environment.

Given the high degree of informality, and lack of heterogeneity in the manufacturing workforce for women, the first step to boost participation is skill training. According to the Periodic Labour Force Survey, about 6% of women in the sector have either formal vocational training or training on the job. Hence, upskilling women is imperative to improve both participation and productivity.

Second, it is essential that women complete their higher education, which could improve their chances of being employed in manufacturing. Nearly 47% of men in manufacturing have completed secondary education or higher, compared to just 30% of women.

Third, there is an immediate need for greater sectoral diversification. Lastly, it is salient to make work environments safe to improve workforce participation. For instance, Tamil Nadu initiated the 'Thozhi' scheme under which it built working women hostels. Such specific interventions are needed in each State to address their unique challenges.





## LIFE AND SCIENCES

### THE MOON KING

- According to the Guardian, Astronomers have discovered 128 new moons orbiting Saturn, giving it an insurmountable lead in the running tally of moons in the solar system. Until recently, the “moon king” title was held by Jupiter, but Saturn now has a total of 274 moons, almost twice as many as all the other planets combined. The team behind the discoveries had previously identified 62 Saturnian moons using the Canada France Hawaii telescope and, having seen faint hints that there were more out there, made further observations in 2023.
- The moons have been formally recognised by the International Astronomical Union and, for now, have been assigned strings of numbers and letters. They will eventually be given names based on Gallic, Norse and Canadian Inuit gods, in keeping with convention for Saturn’s moons.
- The moons were identified using the “shift and stack” technique, in which astronomers acquire sequential images that trace the moon’s path across the sky and combine them to make the moon bright enough to detect. All of the 128 new moons are “irregular moons”, potato-shaped objects that are just a few kilometres across. The escalating number of these objects highlights potential future disagreements over what actually counts as a moon.
- Discovering moons or planets is by no means an easy task. A single snapshot wouldn’t suffice: One would have to take sequential pictures and then stack them by appropriately shifting the images to account for the movement of the objects.
- It is necessary to stack images so that faint objects become discernible. To give you an idea of the faintness of these moons: Detecting one is comparable to finding the light of a bunch of candles on the Moon from the Earth! All these mean a patient and meticulous study that can take years.
- The newly found Saturn’s satellites are certainly not like our Moon. They are tiny in comparison, perhaps a few kilometres across, compared to the Moon’s radius of 1,737 km.

### TRACKING THE WORLD’S FORESTS: HOW THE ESA’S BIOMASS MISSION WILL WORK

The European Space Agency (ESA) is set to launch its ambitious Biomass mission later this month.

The mission will map the world’s forests to provide the very first comprehensive measurements of forest biomass at a global scale. It will find out how forests are changing, and further our understanding about their role in the carbon cycle.

- The satellite is scheduled to lift off on April 29 aboard a Vega C rocket from the ESA’s Korou spaceport in French Guiana. It will be placed in a sun-synchronous orbit — meaning that it will always appear in the same position relative to our star — at an altitude of around 666 km.
- In 2023, Earth lost 3.7 million hectares of tropical forests, equivalent to losing around ten football fields worth of forest land every minute, according to a report by the World Resources Institute. “This forest loss produced roughly 6% of estimated global CO<sub>2</sub> emissions in 2023,” the report said.



- To fulfil its objectives, the mission will use a synthetic aperture radar (SAR) to map the Earth's surface. Notably, the satellite, which is fitted with a massive 12-m antenna, will be the first in space to use a long-wave P-band SAR.

**Do You Know:**

- All life on Earth, from smallest microbes to gigantic California Redwoods, is carbon-based. As such, carbon is the element that makes life as we know it possible. But Earth does not gain or lose carbon. The element only moves between the atmosphere, living organisms, Earth's crust and soil, and the oceans. This process is known as the carbon cycle, of which forests are an essential part. This is because forests store massive amounts of carbon — scientists estimate that they absorb around 16 billion metric tonnes of carbon dioxide (CO<sub>2</sub>) per year, and currently hold 861 gigatonnes of carbon in their soils and vegetation.
- Unfortunately, data on forest biomass — the mass of organic matter in forests — are severely lacking on a global scale. This fundamentally limits our understanding of the state of the forests, and their impact on the carbon cycle (and climate).
- The Biomass mission aims to bridge this knowledge gap. The mission will allow scientists to more accurately measure how the distribution of carbon in the planet is changing, as humans continue to cut down trees, and increase CO<sub>2</sub> levels in the atmosphere.

**JEFF BEZOS'S ALL-WOMEN FLIGHT: NOT SUCH A MILESTONE**

The space wars are heating up. On Monday, an all-women crew aboard Jeff Bezos's Blue Origin New Shepard spacecraft travelled 100 km above Earth, breached the Karman line, "saw the Moon", and experienced weightlessness briefly. The celebrities on board were, in no particular order: Singer-songwriter Katy Perry, news presenter Gayle King, film producer Kerianne Flynn, former NASA engineer Aisha Bowe, scientist Amanda Nguyen and philanthropist Lauren Sanchez, Bezos's fiancée.

Apparently, the all-women-squad idea came to Sanchez hours after Bezos returned from his own space jaunt in 2021. With the billionaire's green signal, four years later, the mission — marketed as a giant leap for womankind — took off for all of 11 minutes. With six capes and a CGI budget, the superhero movie could have written itself. Only, this wasn't quite the feminist triumph it's being made out to be. For one, this is not the first all-women crew travelling to space — Valentina Tereshkova's solo mission in 1963 holds that title. Second, ultimately, this is a battle for space between Elon Musk's SpaceX and Bezos's Blue Origin — and so far, Musk has the undisputed lead. The "glamour" — "Space is going to finally be glam," Perry remarked — seems to be serving the same function that many other women-forward projects in the public eye do: A lip-service-heavy grab for profits. Empowerment, moreover, comes at a steep cost: The first ticket for Bezos's rocket was auctioned at \$28 million.

Of course, star power can be a powerful ambassador for science. But whether this joyride amounts to a meaningful feminist victory is quite another matter. After all, six more stars lighting up the sky can mean only so much to those grounded on Earth.



## DOES AI STILL HALLUCINATE OR IS IT BECOMING MORE RELIABLE?

When people on the internet searched Google for “cheese not sticking to pizza” in May 2024, the newly launched ‘AI Overviews’ feature of the popular search engine replied “you can ... add about  $\frac{1}{8}$  cup of non-toxic glue to the sauce to give it more tackiness.”

In a series of strange answers, the artificial intelligence (AI) tool also recommended that people eat one small rock a day and drink urine in order to pass kidney stones. The popular name for these bizarre answers is hallucinations: when AI models face questions whose answers they weren't trained to come up with, they make up sometimes convincing but often inaccurate responses.

Like Google's ‘AI Overviews,’ ChatGPT has also been prone to hallucinations. In a 2023 Scientific Reports study, researchers from the Manhattan College and the City University of New York compared how often two ChatGPT models, 3.5 and 4, hallucinated when compiling information on certain topics. They found that 55% of ChatGPT v3.5's references were fabricated; ChatGPT-4 fared better with 18%.

“Although GPT-4 is a major improvement over GPT-3.5, problems remain,” the researchers concluded.

Hallucinations make AI models unreliable and limit their applications. Experts said they were sceptical of how reliable AI tools are and how reliable they are going to be. And hallucinations were not the only reason fuelling their doubts.

### Defining reliability

To evaluate how reliable an AI model is, researchers usually refer to two criteria: consistency and factuality. Consistency refers to the ability of an AI model to produce similar outputs for similar inputs. For example, say an email service uses an AI algorithm to filter out spam emails and say an inbox receives two spam emails that have similar features: generic greetings, poorly written content, etc. If the algorithm is able to identify both these emails as spam, it can be said to be making consistent predictions.

Factuality refers to how correctly an AI model is able to respond to a question. This includes “stating ‘I don't know’ when it does not know the answer,” Sunita Sarawagi, professor of computer science and engineering at IIT-Bombay, said. Sarawagi received the Infosys Prize in 2019 for her work on, among other things, machine learning and natural language processing, the backbones of modern-day AI.

When an AI model hallucinates, it compromises on factuality. Instead of stating that it doesn't have an answer to a particular question, it generates an incorrect response and claims that to be correct, and “with high confidence,” according to Niladri Chatterjee, the Soumitra Dutta Chair professor of AI at IIT-Delhi.

### Why hallucinate?

Last month, several ChatGPT users were amused when it couldn't generate images of a room with no elephants in it. To test whether this problem still persisted, this reporter asked OpenAI's DALL-E, an AI model that can generate images based on text prompts, to generate “a picture of a room with no elephants in it.” See the image above for what it made.



When prompted further with the query, “The room should have no pictures or statues of elephants. No elephants of any kind at all,” the model created two more images. One contained a large picture of an elephant while the other contained both a picture and a miniature elephant statue. “Here are two images of rooms completely free of elephants — no statues, no pictures, nothing elephant-related at all,” the accompanying text from DALL-E read.

Such inaccurate but confident responses indicate that the model fails to “understand negation,” Chatterjee said.

Why negation? Nora Kassner, a natural language processing researcher with Google’s DeepMind, told Quanta magazine in May 2023 that this stems from a dearth of sentences using negation in the data used to train generative AI models.

Researchers develop contemporary AI models in two phases: the training and the testing phases. In the training phase, the model is provided with a set of annotated inputs. For example, the model can be fed a set of elephant pictures labelled “elephant.” The model learns to associate a set of features (say, the size, shape, and parts of an elephant) with the word “elephant.”

In the testing phase, the model is provided with inputs that were not part of its training dataset. For example, the researchers can input an image of an elephant that the model didn’t encounter in its training phase. If the algorithm can accurately recognise this picture as an elephant and distinguish it from another picture, say of a cat, it is said to be successful.

Simply speaking, AI models don’t understand language the way humans do. Instead, their outputs are driven by statistical associations they learn during the training phase, between a given combination of inputs and an output. As a result, when they encounter queries that are uncommon or absent in their training dataset, they plug in the gap with other associations that are present in the training dataset. In the example above, it was “elephant in the room.” This leads to factually incorrect outputs.

Hallucinations typically occur when AI models are prompted with queries that require “ingrained thinking, connecting concepts and then responding,” said Arpan Kar, professor of information systems and AI at IIT-D.

#### **More or less reliable?**

Even as the development and use of AI are both in the throes of explosive growth, the question of their reliability looms large. And hallucinations are just one reason. Another reason is that AI developers typically report the performance of their models using benchmarks, or standardised tests, that “are not foolproof and can be gamed,” IIT-Delhi’s Chatterjee said.

One way to “game” benchmarks is by including testing data from the benchmark in the AI model’s training dataset.

In 2023, Horace He, a machine learning researcher at Meta, alleged that the training data of ChatGPT v4 might have been “contaminated” by the testing data from a benchmark. That is, the model was trained, at least partly, on the same data that was used to test its capabilities. After computer scientists from Peking University, China, investigated this allegation using a different benchmark, called the HumanEval dataset, they concluded that there was a good chance it was true. The HumanEval benchmark was created by researchers from OpenAI, the company that owns and builds ChatGPT.





According to Chatterjee, this means while the model might perform “well on benchmarks” because it has been trained on the testing data, its performance might drop “in real-world applications.”

#### **A model without hallucinations**

But all this said, the “frequency of hallucination [in popular AI models] is reducing for common queries,” Sarawagi said. She added this is because newer versions of these AI models are being “trained with more data on the queries where the earlier version was reported to have been hallucinating.” This approach is like “spotting weaknesses and applying band-aids,” as Sarawagi put it.

However, Kar of IIT-Delhi said that despite there being more training data, popular AI models like ChatGPT won’t be able to reach a stage where they won’t hallucinate. That will require an AI model to be “updated with all the possible knowledge all across the globe on a real-time basis,” he said. “If that happens, that algorithm will become all-powerful.”

Chatterjee and Sarawagi instead suggested shifting how AI models are built and trained. One such approach is to develop models for specialised tasks. For example, unlike large language models like ChatGPT, small language models are trained only on parameters required to solve a few specific problems. Microsoft’s Orca 2 is an SLM built for “tasks such as reasoning, reading comprehension, math problem solving, and text summarisation,” for instance.

Another approach is to implement a technique called retrieval-augmented generation (RAG). Here, an AI model produces its output by retrieving information from a specific database relevant to a particular query. For example, when asked to respond to the question “What is artificial intelligence?”, the AI model can be provided with the link to the Wikipedia article on artificial intelligence. By asking the model to refer to only this source when crafting its response, the chances of it hallucinating can be substantially reduced.

Finally, Sarawagi suggested that AI models could be trained in a process called curriculum learning. In traditional training processes, data is presented to AI models at random. In curriculum learning, however, the model is trained successively on datasets with problems of increasing difficulty. For example, an AI model can be trained first on shorter sentences, then on longer, more complex sentences. Curriculum learning imitates human learning, and researchers have found that “teaching” models this way can improve their eventual performance in the real world.

But in the final analysis, none of these techniques guarantee that they will get rid of hallucinations altogether in AI models. According to Chatterjee, “there will remain a need for systems that can verify AI-generated outputs, including human oversight.”

#### **OPENAI’S GHIBLI-STYLE AI IMAGE GENERATOR AND COPYRIGHT LAW**

Japanese director Hayao Miyazaki’s anime fantasy films have enthralled generations of children both within Japan and internationally. These movies instilled in countless viewers a lifelong opposition to war, militarisation, and all forms of violence, regardless of their political affiliation. Across Studio Ghibli films like Princess Mononoke, Howl’s Moving Castle, and Castle in the Sky, soldiers are portrayed as misled fighters at best and sexual predators at worst.

This is why there was widespread shock when the official Israeli Defense Forces (IDF) account on X shared images reminiscent of Studio Ghibli’s style. The IDF’s collage was prompted by OpenAI’s



late March update to the GPT4o model. This update enabled users to simply type text prompts into ChatGPT to generate images imitating Studio Ghibli's iconic animation style.

While most people initially used ChatGPT's new image update to transform themselves or their family portraits into adorable, Studio Ghibli-inspired images, others ventured further. They created anime stills from photos of the 9/11 terror attacks and the assassination of John F. Kennedy. Users shared Studio Ghibli-style pornography, "Ghibli-fied" stills from Bollywood films, and even a short video clip re-imagining Christopher Nolan's *Interstellar* as a Studio Ghibli film. What's more, the irony of Nolan's *Oppenheimer* being turned into a Studio Ghibli-style image was lost on far too many.

One AI anime image that gained widespread attention in India depicted the destruction of the Babri Masjid in 1992 by Hindutva rioters. This image, rendered in a distorted Studio Ghibli style, featured anime figures waving flags atop the mosque's dome, cheering in celebration.

Another viral image was shared by the U.S. White House. This picture, in a childish anime style, mocked a foreign citizen accused of drug trafficking who was visibly distraught as she was taken into custody. The IDF account on X also joined the trend, sharing anime images of soldiers using communication devices and flying planes.

### **The art behind the trend**

Professor David Leslie, Director of Ethics and Responsible Innovation Research at The Alan Turing Institute, highlighted the ethical concerns surrounding the misappropriation of a man's life work in "troubling ways."

"Miyazaki has always been a person who takes a lot of care to present the ideas that are passionate to him in his works, and here you've got just an operationalisation of the patterns or the styles of those work[s], now being easily re-appropriated in any context, right? So you've got the IDF of Israel producing Miyazaki-style images," said Mr. Leslie. He described the Japanese artist as "one of the great pacifists of his generation."

Mr. Leslie acknowledged that Studio Ghibli's media would likely be part of the OpenAI model's training data set. However, he stressed the need for a more evidence-based approach to explore the extent of its presence. He also highlighted OpenAI's lack of transparency as a potential complication in this process.

Miyazaki's ardent fans have resurfaced an old video where the Japanese director expressed disgust when introduced to AI-generated motion animation. In the video, Miyazaki referred to AI art as an "insult to life itself."

Last year, OpenAI championed the fair use defence, which allows copyrighted works to be used in specific circumstances. The company claimed this usage was "fair to creators, necessary for innovators, and crucial for U.S. competitiveness."

However, Leslie urged the public to consider a broader perspective beyond fair use regulations. He questioned whether OpenAI's actions were advancing the shareholder value of itself and Microsoft, or if they were aligned with the public interest.



### Fair use?

Diving into the legal intricacies, Geoffrey McGovern, Director of Intellectual Property and Senior Political Scientist at the RAND non-profit organisation, clarified that while specific creative products or works enjoy copyright protection, this is not the case for concepts and ideas.

Mr. McGovern explained, "For instance, if Georges Braque, the French painter, sought to copyright Still Life with Metronome and the style that became known as Cubism, the painting's image would theoretically be copyrightable. It's an image that can be reproduced, and the rights to that reproduction would vest in Braque. However, the 'Cubist style' is an idea. U.S. law does not permit the ownership of ideas. It becomes IP-protected only once those ideas are manifested in some form, such as a photograph, poem, recipe, film, composition, and so on."

Mr. McGovern elaborated, "In this manner, the Studio Ghibli style is not copyrightable, and therefore, the ChatGPT-generated image does not constitute a copyright violation."

Tori Noble, Staff Attorney at the Electronic Frontier Foundation, noted that U.S. courts have yet to determine whether AI models that generate images in an artist's "style" are considered to be violating copyright.

For instance, in an ongoing case in the U.S. District Court for the Northern District of California, Andersen versus Stability AI Ltd., it was alleged that AI art generators produced images in the style of specific artists. The crux of the matter lies in determining whether the models' output infringed upon protectable creative expression and whether using works to develop AI image generators constitutes fair use. Ms. Noble sheds light on these undecided issues in the case.

### Expressing love, sans AI

In our world, there are already works of art inspired by Studio Ghibli that were created without using AI.

One example is The Glassworker, a 2024 fantasy film directed by Usman Riaz. This film was celebrated as Pakistan's first hand-drawn animated feature film. The character designs clearly demonstrate Riaz's deep admiration for Studio Ghibli.

Unlike AI-generated images that are hastily assembled by machines in seconds, The Glassworker was meticulously crafted over years. Riaz's film received expert support from a Studio Ghibli producer, and it paid homage to Miyazaki's strong anti-war beliefs. This contrasts sharply with the "Ghibli-fied" images posted by the U.S. White House, the IDF, and individuals who celebrate the destruction of Islamic places of worship in India. This juxtaposition is particularly jarring for those who understand Miyazaki's anti-war films beyond their superficial appeal as photo filters.

Unlike many civil law countries, the United States does not safeguard the "moral rights" of creators to control how their work is used or adapted, clarified Ms. Noble. Consequently, Studio Ghibli films are not entitled to these very limited moral rights in the U.S, she added.

Even if applicable, U.S. moral rights would not permit Studio Ghibli to prevent others from imitating their artistic style to create new, transformative works, according to her.

Artists are now contemplating their next steps in response to concerns about their work being illegally stolen or scraped to train AI models. "This is one of the biggest technology law questions of our age," said Mr. McGovern, "and there is no easy answer that works for all artists." He



suggested that creators be cautious about posting their work online, or that they explore using paywalls as a safeguard.

Meanwhile, Ms. Noble explained that websites take action to limit content scraping through the Robots Exclusion Protocol (REP). The REP enables websites to include a “robots.txt” file containing rules that restrict data scraping. While these rules are non-binding, OpenAI and other prominent American AI developers currently respect robots.txt restrictions, but not all may, Ms. Noble said.

Some artists are utilising anti-AI tools such as Glaze, which are virtually imperceptible to the naked eye but were designed to disrupt or at least mislead AI models attempting to scrape Glaze-protected art for training purposes.

Ms. Noble proposed that social and labour policies would be more effective avenues for countries to protect artists and creators from the economic harm caused by AI.

“At least in the U.S., extending copyright protection to uses of works for AI training purposes would not be an effective way to protect artists’ livelihoods, and may actually undermine their interests over time,” she said.

For his part, Mr. Leslie cautioned that the viability of living as an artist is not only being challenged by OpenAI but also by other companies that influence how people perceive (or disregard) the work of human artists and art teachers.

“If we kind of widen the lens and really think about the life of artists and the sustainable professional life of artists, the Ghibli moment is really an important but surface-level warning about a deeper transformation that’s happening, where there is, I think, an existential risk to the future [that] visual artists have,” he said.

## COULD META BE BROKEN UP FOR BEING AN ILLEGAL MONOPOLY? A HISTORIC TRIAL IN US

Social media giant Meta, parent to popular companies like Facebook, Instagram and WhatsApp, is on the stand. The allegation: it engaged in “illegal monopolisation” by buying out competitors — at the time Instagram (in 2012 for \$1 billion) and WhatsApp (in 2014 for \$19 billion) — in an anticompetitive fashion, described by regulators as a “buy-or-bury strategy”.

- Meta could be ordered to break off from these companies, setting up a landmark precedence in the technology sector.
- It was in this context that Meta CEO Mark Zuckerberg took the witness stand on Monday in the consequential trial, which was first brought to court in 2020 under US President Donald Trump’s previous term, and defended against allegations that his company operates a social media monopoly.
- The case was prepared by the Federal Trade Commission (FTC) and if the regulator manages to convince a Washington court to rule in its favour, it could lead to a split up of the \$1.4 trillion company — the biggest splintering of a company in over four decades, when telecom giant AT&T was unwound. But more broadly, it could set a new precedence for how Big Tech companies operate.





- It would also show the appetite the new US administration has to take on the Big Tech, especially as many of them have made a beeline to placate Trump, by adopting measures such as pausing diversity hires, stopping fact checks, and establishing a clearer communication line with the White House, among other things.

**Do You Know:**

- The regulator had alleged that Meta had illegally maintained its personal social networking monopoly through a years-long course of anticompetitive conduct.
- According to the FTC's complaint, Facebook targeted potential competitive threats to its dominance. Instagram, a rapidly growing startup, emerged at a critical time in personal social networking competition, when users of personal social networking services were migrating from desktop computers to smartphones, and when consumers were increasingly embracing photo-sharing.
- The complaint alleged that "Facebook executives, including CEO Mark Zuckerberg, quickly recognised that Instagram was a vibrant and innovative personal social network and an existential threat to Facebook's monopoly power".
- According to the FTC, Facebook (since rebranded to Meta) initially tried to compete with Instagram on the merits by improving its own offerings, but ultimately chose to buy Instagram rather than compete with it. "Facebook's acquisition of Instagram for \$1 billion in April 2012 allegedly both neutralises the direct threat posed by Instagram and makes it more difficult for another personal social networking competitor to gain scale," the complaint said.
- Around the same time, according to the complaint, Facebook perceived that "over-the-top" mobile messaging apps also presented a serious threat to the company's monopoly power.

**U.K. TOP COURT'S DEFINITION OF WOMAN FURTHER POLARISES DEBATE ON GENDER**

On April 16, the U.K.'s Supreme Court unanimously ruled that only biological women and not transwomen meet the definition of a woman under equality laws. The central question in *For Women Scotland Ltd. (Appellant) vs The Scottish Ministers (Respondent)* was "whether the Equality Act 2010 treats a transwoman with a gender recognition certificate (GRC) as a woman for all purposes within the scope of its provisions, or when that Act speaks of a 'woman' and 'sex', it is referring to a biological woman and biological sex".

**The ruling**

In an 88-page judgment, the five judges – three men (Lord Reed, President Lord Hodge, Deputy President Lord Lloyd-Jones) and two women (Lady Rose, Lady Simler) – held that they wanted to address the "meaning of the words" which Parliament used in EA 2010 in "legislating to protect women and members of the trans community against discrimination." It said that among the people whom the EA 2010 recognises as having protected characteristics are women, whose "protected" characteristic is sex, and "transsexual" people, whose "protected" characteristic is gender reassignment. After hearing both the appellant and the respondent, and experts and activists, Britain's highest court gave its "statutory interpretation" that the terms 'woman' and 'sex' in the EA 2010 refer only to a biological woman and biological sex.



## Trans rights

Trans supporters and campaigners worry that the ruling is a setback for trans inclusion. Jane Fae, director of the campaign group TransActual, told The Guardian, that the ruling had stripped away protections for trans people to the “bare minimum, by reducing the legal protections only to cases involving harassment, discrimination or equal pay”. Kishwer Falkner, the chair of the Equality and Human Rights Commission (EHRC), added to the fears of the trans community by saying that the court’s judgment meant only “biological women could use single-sex changing rooms and women’s toilets, or participate in women-only sporting events and teams, or be placed in women’s wards in hospitals.” Many trans people who have undergone gender reassignment admit that the toilet issue — should transwomen be allowed in women-only spaces? — needs to be sorted out. The judges counselled against reading the judgment as a triumph for one or more groups in society at the expense of another — “it is not,” Justice Hodge told the media. The judges are of the view that the Gender Recognition Act 2004 continues to provide legal recognition of the rights of transgender people, which has practical effects for individual rights and freedoms “(including, for example, in the context of marriage, pensions, retirement and social security).” Transgender people, the ruling noted, are also protected by the indirect discrimination provisions of the EA 2010 “without the need for a certificated sex reading of the EA 2010”.

## S. AFRICA’S ‘CRADLE OF HUMANKIND’ CAVES REOPEN TO PUBLIC

Seated on sandbags in a knee-deep grid dug in South Africa’s Sterkfontein caves, where one of our earliest ancestors was found, Itumeleng Molefe swept ancient soil into a blue dustpan, each brushstroke hunting for hidden clues.

Nearby, visitors marvelled at the weathered limestone rocks hanging from the ceiling of the caves, millions of years old.

Located 50 km northwest of Johannesburg, the caves closed nearly three years ago due to flooding and reopened Tuesday with a new experience bringing tourists closer to the scientific action.

The complex is housed within the Cradle of Humankind World Heritage Site, a rich source of artefacts for palaeontologists.

“My aim is to find important bones here,” said Molefe. His most prized find since joining the excavation team in 2013 was an early human hand bone. His father was part of the team that uncovered South Africa’s most famous find, a skeleton dubbed “Little Foot”, in the caves. Deriving its name from the size of the bones first discovered in the 1990s, it is the most complete specimen of a human ancestor yet discovered, estimated to be between 1.5 and 3.7 million years old.

“This reopening represents a significant evolution in how we share the story of human origins,” said Nithaya Chetty, dean of the University of the Witwatersrand faculty of science, which manages the caves and the nearby museum. “Visitors now have unique opportunities to engage with active live science and research, all happening in real time,” said the professor.

## IS THE ONCE-EXTINCT DIRE WOLF BACK?

### The story so far:

On April 7, a biotechnology company in Texas, U.S., named Colossal Biosciences announced that it had “resurrected” a dire wolf, a large predator that went extinct more than 12,000 years ago. The



company's claim that it had facilitated the birth of three dire wolf pups was met with a mix of wonder and delight. Videos of the baby wolves howling went viral, with the company calling their howls the first to be heard on earth in 10 millennia.

#### **Have dire wolves been de-extincted?**

The total DNA content of an organism, called its genome, is important to understand its identity. The genome of a gray wolf consists of 2.447 billion base pairs. This means there are 2.447 billion positions in the DNA filled by one of the four nucleotides: adenine, thymine, cytosine, and guanine. The order in which these four nucleotides appear determines the genetic identity of an organism. In a preprint paper uploaded on April 11, Colossal Biosciences claimed that the genomes of the gray wolf (*Canis lupus*) and the dire wolf (*Aenocyon dirus*) are 99.94% identical, meaning 2.445 billion of the 2.447 billion base pairs were in the same places in the two genomes.

This small difference is enormous in genetic terms. Humans and chimpanzees share about 98.77% of their DNA, yet no one would mistake one for the other. In the case of wolves, the 0.06% difference still corresponded to 1.47 million base pairs differing between the two species.

These differences are what make the two animals distinct. To create these 'dire wolf' pups, Colossal scientists edited the genome of a gray wolf and implanted embryos with the modified genome into surrogate dog mothers. While Colossal hasn't revealed the exact nature of the changes its scientists made, it says on its website that it made "precise genetic edits at 20 loci across 14 genes" on the genome of a gray wolf to "recreate" the dire wolf. In other words, even if there were a few hundred individual edits across those 20 loci (or positions on the genome), the new animals probably contain 0.02% of the changes that would make them a true dire wolf. And this is an optimistic estimate. Put another way, the new wolf pups are far from being dire wolves.

#### **What changes did scientists make?**

The 20 locations where Colossal scientists edited the gray wolf genome all appear to be places that would result in cosmetic changes. For example, one of these regions is on a gene called *LCORL*, which is responsible for the dire wolves' larger size. Other edits include genes involved in fur colour and density. Thus, Colossal Biosciences can be said to have made gray wolves that look like dire wolves.

While the nature and magnitude of the genetic differences already undermine Colossal's claims, a 2021 study published in *Nature* raised a more fundamental issue. The study suggested that despite genetic similarities, dire wolves may not be true wolves at all, but rather a distinct canid lineage that diverged long before modern wolves evolved. This study prompted scientists to reclassify dire wolves, and their species name changed from *Canis dirus* to *Aenocyon dirus*. This means dire wolves' behaviour, social structure, and ecological roles are likely different from that of modern wolves.

#### **Why is de-extinction controversial?**

Colossal has said on its website that its mission is to "secure the health and biodiversity of our planet's future." To achieve this, the company aims to revive several extinct species — including the woolly mammoth, the thylacine, and the dodo — and reintroduce them in the wild. Bringing back animals that lived thousands of years ago, like the dire wolf or woolly mammoth, carries significant ecological risks. The environmental conditions, plant communities, prey species, and



climate that once supported these animals no longer exist. Modern landscapes are fragmented, and heavily altered by human influence.

Reintroducing extinct species to such drastically changed habitats could do more harm than good, potentially disrupting current ecosystems rather than restoring ancient ones.

#### **How is conservation changing?**

Misguided claims like these can often have a detrimental effect on lawmakers' priorities. For instance, The Washington Post reported Colossal's dire wolf announcement buttressed the Trump administration's plan to weaken federal protections for endangered species.

It quoted Interior Secretary Doug Burgum as saying innovation rather than government regulations will protect species.

Scientists have estimated that 99.9% of all species that ever lived on the earth are now extinct. Dire wolves themselves most likely died out at the end of the last ice age when the numbers of large herbivores, their main prey, started dwindling. The idea of reviving extinct animals is certainly captivating but it seems more prudent to apply this technology to protect and strengthen existing ecosystems rather than reviving extinct ones.

The birth of the genetically modified gray wolf pups may mark the beginning of a new era in conservation, but doubt lingers on what kind of an era it will be.

#### **QUICKER, INEXPENSIVE INDIGENOUS TB TEST DEVELOPED**

Researchers at the Thiruvananthapuram-based Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) have developed and tested a novel, cost-effective, real-time LAMP (rt-LAMP) assay for early diagnosis of TB. Much like GeneXpert and Truenat, the rt-LAMP assay too is a molecular test with high sensitivity and specificity. The rt-LAMP assay was able to detect TB DNA even when only 10 copy numbers were present per microlitre in a sample.

The main handicap that prevented the use of LAMP for TB diagnosis so far was the inability of using any dye, as dyes generally inhibit reaction leading to false negatives. Researchers at SCTIMST have overcome this challenge by turning to a fluorescent dye Syto 16, which is routinely used in labs for studying cells and other biological samples. And unlike RT-PCRs that require three different temperature settings to complete a test, the rt-LAMP test works at a single temperature. Since a fluorescent dye is used, the amplification can be measured not at the end of the run but every minute.

#### **UNDERSTANDING THE OBSESSION WITH FAIRER SKIN TONES AND SKIN LIGHTENING TREATMENTS**

The debate over how the preference for fair skin impacts those who are a darker shade was in the limelight recently, after Kerala's Chief Secretary Sarada Muraleedharan called out colour and gender bias. Across much of the world, and particularly in India, skin colour remains quietly powerful — shaping ideas of beauty, respectability, and even social mobility. In this environment, the desire for lighter skin has fuelled a booming market of creams and combinations, many of which are not only ineffective, but actively harmful.





But understanding this trend — and challenging it — requires more than dermatological guidance. It calls for an interdisciplinary approach, one that draws on anthropology to trace the cultural roots of colourism, and on dermatology to address its consequences.

### **Between evolution and meaning**

Human skin colour is, in evolutionary terms, a remarkable adaptation. Populations in equatorial zones developed more melanin to protect against ultraviolet radiation, while those further from the equator evolved lighter pigmentation to aid in vitamin D synthesis.

Yet over time, skin tone came to signify more than just geography. As S. Sumathi, Professor Emeritus of Anthropology at the University of Madras, explains, “The idea of colour has historically been linked to opposites — fair and dark, good and bad. These dualities became part of how communities organised themselves socially.” In the Indian context, she notes, these ideas were reinforced by colonial rule and social hierarchies.

Early British ethnographers classified populations based on skin tone and other features, embedding a value system that persists subtly to this day. “Fairness gradually came to be associated with refinement, aspiration, even moral character,” she says. “Unfortunately, those perceptions were absorbed across communities and continue to influence how we see ourselves and each other.”

### **The quiet cost of fairness**

While cultural beliefs sustain the demand for lighter skin, dermatologists are increasingly concerned with the health risks that follow.

Ramesh Bhat, head of research at Father Muller Medical College and former International Director (2019–2024) of the International League of Dermatological Societies (ILDS), has been witnessing a steady rise in patients suffering from the misuse of topical corticosteroids — powerful prescription drugs intended for conditions like eczema or psoriasis. “These are Schedule H medications, meant to be used under medical supervision,” he explains. “But they’re often sold over the counter or even used in salons, particularly for skin lightening.”

The consequences can be serious. “Prolonged use leads to thinning of the skin, acne, infections, and uneven pigmentation — sometimes worsening the very issues people are trying to treat,” says Prof. Bhat. Even more concerning is the growing trend of combination creams, which blend steroids with antifungals or bleaching agents. “These irrational mixes not only damage the skin but also promote resistance, especially to fungal treatments.”

Long-term misuse can also affect internal systems. “We’ve seen cases where extended use leads to elevated blood sugar, high blood pressure, and suppression of adrenal function,” he warns. “It’s a quiet but growing public health concern — rooted not just in access, but in aspiration.”

### **Global industry, a local psychology**

Across Asia, Africa, and Latin America, fairness continues to be marketed as desirable — often as a symbol of progress or modernity. In India, those messages are reinforced through advertising, films, and matrimonial listings. “Even today, fairness is casually equated with success and desirability,” says Prof. Sumathi. “It’s internalised from a very young age, especially among girls. But increasingly, boys are not immune either.”



At the same time, skin tone plays a different role in how masculinity is constructed. “Dark skin is sometimes culturally coded as rugged, strong, or masculine — especially in film and popular culture,” she notes. “But that doesn’t offer immunity. These stereotypes also box men into narrow roles and exclude those who don’t fit the mould.” While women are often pressured to lighten their skin to appear delicate or refined, men may feel compelled to embody a darker, hyper-masculine ideal — leaving little room for nuance, choice, or vulnerability.

What makes this especially difficult to unlearn is that skin tone is not just cosmetic — it’s socially symbolic. “It becomes a way to navigate society. Lighter skin is seen as an asset — in work, in relationships, in everyday interactions,” Prof. Sumathi explains. “That’s why changing these attitudes isn’t just about products, but about perception.”

#### **Rethinking role of medicine, media**

As public concern around steroid misuse grows, the ILDS and national dermatology bodies have called for stronger regulation. But Prof. Bhat believes a more holistic response is needed: “Yes, pharmacists must stop selling these drugs without prescriptions. But we also need public awareness campaigns that de-link fairness from beauty — and promote skin health over skin tone.” Education will play a key role. “Schools and institutions must challenge long-standing stereotypes about skin colour,” says Prof. Sumathi. “If we wait until adulthood, these beliefs are already deeply embedded.” Both experts stress that the media — from cinema to social platforms — has a critical role to play. “We need more realistic and diverse representation,” Prof. Sumathi adds. “Advertising still centres around lighter-skinned models, even when the audience itself is far more diverse.”

Anthropology also offers a way forward — by encouraging us to move beyond the simplistic binary of fair and dark. “Postmodern perspectives suggest that these categories aren’t fixed,” says Prof. Sumathi. “There are nuances, overlaps — and a real need to stop seeing skin tone as a ladder of value.”

Instead of treating fairness as the ideal, we can begin to ask different questions: What does it mean to care for our skin? How can we value health, heritage, and individual variation over inherited ideals? “We must dismantle the idea that beauty, competence, or virtue is tied to complexion,” she says. “This takes time, but it begins with everyday language and representation.”

#### **Towards a different kind of fairness**

Skin, ultimately, is a story — one of ancestry, adaptation, and lived experience. In India, that story has been shaped by history, reinforced by commerce, and absorbed into daily life. But as more voices — from dermatologists to anthropologists, patients to educators — come together, that narrative is beginning to shift. A new kind of “fairness” is emerging: one that prioritises equity over complexion, dignity over perception, and truth over tradition. This isn’t about criticising people for wanting to care for their appearance — that’s a natural instinct. But it’s essential to ensure those choices aren’t shaped by unexamined ideals or unsafe products. True empowerment lies in informed decisions, where beauty isn’t dictated by fairness, and worth isn’t measured in skin tone.