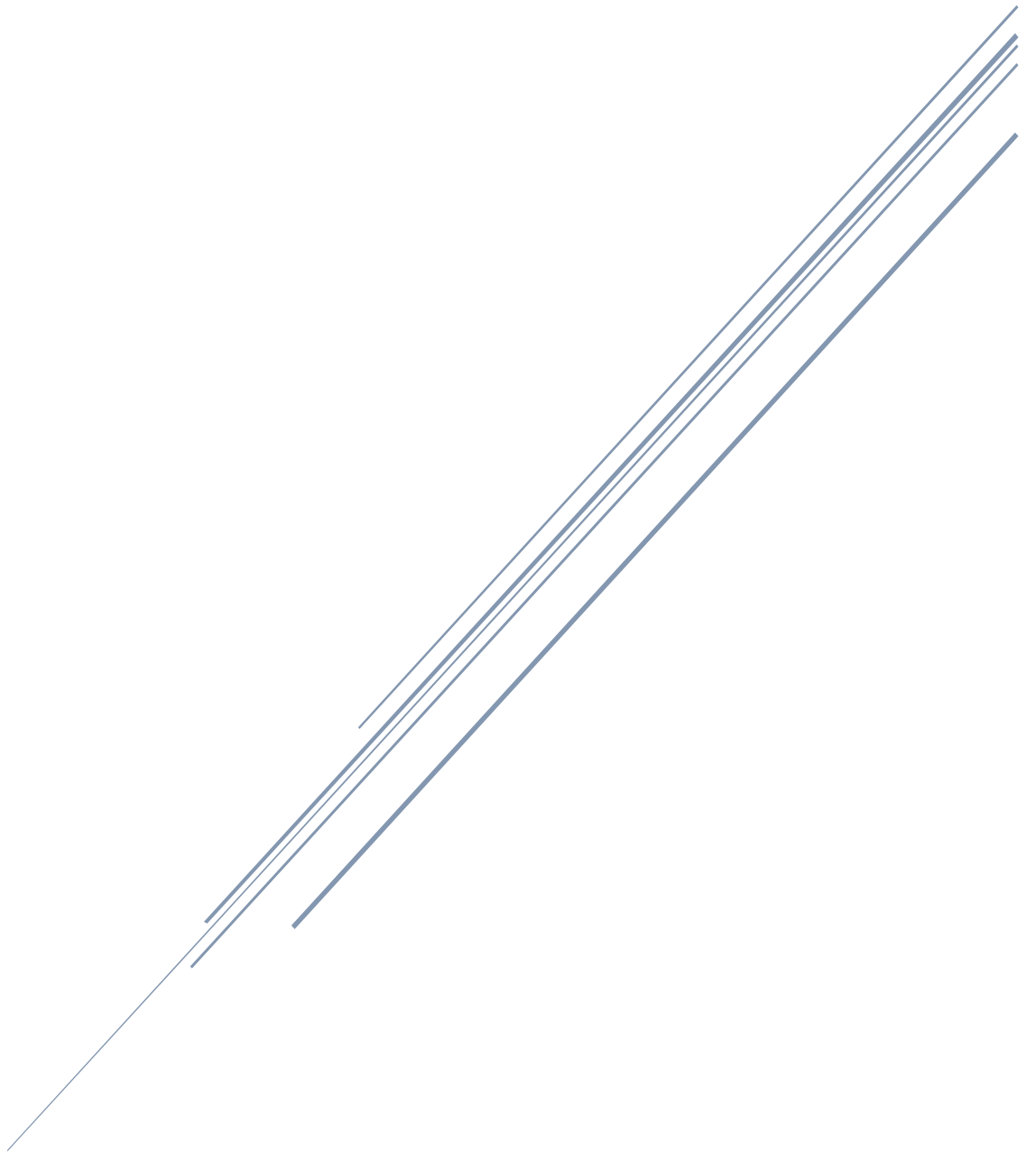


CURRENT AFFAIRS FOR UPSC

29th September to 5th October 2024





INTERNATIONAL

ABORTION OR IMMIGRATION? A RACE TO FRAME THE CONTEST

With exactly 30 days to go before Election Day in the U.S., the two principal contestants for the post of the 47th President are trying to frame the election on the single issue that favour them — for Democrat Kamala Harris, that is abortion rights and for Republican Donald Trump, that is immigration.

Simultaneously, both are trying to reposition themselves on the issue that put them on the defensive — Ms. Harris wants to appear tougher than she has been on the issue of illegal immigration and Mr. Trump wants to appear softer than he used to be on the question of abortion. This contest to frame the contest remains deadlocked as neither has been able to completely overwhelm the American public discourse.

Both Ms. Harris and Mr. Trump would like to sharpen polarisation on one, and diffuse the debate on the other. Both sides misrepresent each other in pursuit of a favourable framing of the contest. In the chaotic mess of issues that confuse Americans — from inflation to global wars to fracking and climate — these are two issues that both parties hope can help them build clarity in their favour.

The abortion debate has been politically rewarding for the Democrats and costly for the Republicans in recent past. In the 2022 mid-term elections that followed the U.S. Supreme Court ruling that abortion was not a constitutionally guaranteed right, Democrats retained control of the Senate and performed above expectations in the House of Representatives. This was attributed largely to an increased support among women for the Democrats.

According to an American University poll this week, Ms. Harris is increasing her lead over Mr. Trump among women voters, and 86% of women disapprove of any government intervention in reproductive choices. Mr. Trump who had earlier claimed credit for the overturning of the constitutional right to abortion by the SC, is now trying to mellow down. His running mate J.D. Vance, appearing in a debate with his opponent Tim Walz this week, admitted that the Republicans need to do “so much better... at earning the American people’s trust back on this issue, where they frankly just don’t trust us”.

Mr. Trump’s wife Melania is reportedly in support of protecting abortion in her memoir slated for release on October 8. A recent *New York Times*-Siena College Poll found abortion rights are one question that Ms. Harris has a significant advantage over Mr. Trump. While Mr. Trump and Mr. Vance are trying to moderate their position on abortion, the Harris campaign accuse them of planning to enforce a nationwide ban or regulation of abortion.

The Trump campaign seeks to link nearly all problems of America to the influx of unauthorised people. According to official estimates, around 10 million people entered the U.S. illegally during the Biden-Harris administration. The Trump campaign alleges this number is 22 million and tries to pin the entire blame on Ms. Harris. Ms. Harris has been promising a strong border policy besides blaming Mr. Trump for blocking border management measures proposed by the Biden administration.

In reality, both abortion and immigration are questions of detail than principle for most Americans, multiple polls show. For instance, until what stage of pregnancy should abortion be



legal or how to manage the admission of new entrants into the U.S., and how many of them should be allowed. Erasing all nuances from the positions, of self and the opponent, appears to be the strategy of both campaigns to gain political mileage.

MAD DOCTRINE

Russian President Vladimir Putin's revision of Russia's nuclear doctrine announced last week is a worrying increase in the war rhetoric surrounding the Russia-Ukraine conflict. It would once have been considered unthinkable for permanent members of the UN Security Council to behave in this manner. His announcement was that in the event of a conventional attack on Russia by any country that is supported by a nuclear power, Russia would consider that a "joint attack" and presumably, deal with the threat accordingly. He added that Russia could use nuclear weapons in response to a conventional attack posing a "critical threat to [its] sovereignty", a threat that was repeated by Russian Foreign Minister Sergey Lavrov at the UN General Assembly meet over the weekend, when he said the idea of defeating Russia on the battlefield is "senseless" and a "suicidal escapade" given that Moscow has nuclear weapons. Clearly, the context of Mr. Putin's nuclear doctrine revision and the comments is Ukraine President Volodymyr Zelenskyy's visit to the United States, where he attempted to present a new "victory plan" for Ukraine. Mr. Zelenskyy wants the permission of the U.S. and other western countries to use missiles and other heavy weaponry procured from them for attacks deep inside Russia. Thus far, the weaponry, including Storm Shadow and ATACMS missiles, can only be used for Ukraine's defence, although western capitals turned a blind eye when Ukrainian forces invaded the Russian Oblast of Kursk in August with tanks and weaponry, allowing Mr. Zelenskyy to rack up a symbolic win and possibly some leverage in future negotiations for peace. However, much of the euphoria in Kyiv has since dissipated with Russia hitting back anew, sending in troops to Kursk, and also opening a new front around Ukraine's Pokrovsk, and western countries remaining loathe to enter the theatre of war. To that end, U.S. President Joseph Biden has now announced nearly \$8 billion in additional military aid for Ukraine, but made no reference to the demand for its utilisation inside Russia.

It remains to be seen whether Mr. Putin will be assuaged, or if concerns about the war reaching a "nuclear threshold" will grow from this point on, and it is hoped countries, including India, that have committed to finding a path to dialogue and peace, redouble their efforts to prevent such a catastrophe. New Delhi has said that it "conveyed messages" to Moscow when safety concerns grew over the Zaporizhzhia nuclear plant. Prime Minister Narendra Modi may be called on to do the same when he visits Russia in October for the BRICS summit. As the world grapples with the spectre of escalation in West Asia, the last thing it needs is a reversion to chilling cold war scenarios in Eurasia, of mutually assured destruction.

INFLECTION POINT

Iran's October 1 ballistic missile attack on Israel marks a serious escalation in the multi-party conflict in West Asia. The attack is not surprising as Iran was under pressure, at home and in the region, from its allies, to respond to repeated Israeli provocations. It was Israel that took the war straight to Iran by attacking the Iranian embassy complex in Damascus, Syria, on April 1. Iran responded with its first direct attack on Israel 14 days later, giving Israel and its allies enough time to prepare for it. Israel's response was a symbolic, unclaimed strike at a radar system in Isfahan. In end-July, Israel again escalated the conflict by killing Ismail Haniyeh, the political chief of Hamas, in Tehran. Iran vowed retaliation but showed restraint, promising to hold back fire if there was a ceasefire in Gaza. But Israel not only continued the war on Gaza but also expanded the



war in the north with Hezbollah. Late last month, Israel unleashed waves of attacks on Lebanon, killing Hezbollah's commanders and its chief, Hassan Nasrallah. Now, with Israel threatening to respond to the October 1 attack, the conflict is set to enter a more dangerous phase.

In the current conflict, no party is deterring its rivals. Israel's greater firepower did not stop Hamas from launching the October 7, 2023 attack. Israel's threats of retribution did not stop Hezbollah or the Houthis either from attacking the Jewish state. Nor did Iran's proxy network and its missile might deter Israel from expanding the war by bombing the Iranian embassy complex in Syria. And Israel's nuclear weapons did not stop Iran from launching direct attacks on the country. As deterrence collapsed, the crisis has escalated and widened. What has made the situation worse is the abdication of leadership by U.S. President Joe Biden. He has given Israel a free hand in Gaza while focusing his diplomatic resources on preventing a regional war. He has remained unmoved when Israeli Prime Minister Benjamin Netanyahu has continued to breach red line after red line. Today, the war in Gaza remains unfinished, while a regional war, which could draw in even the U.S., could break out any time. There are no clear off-ramps. A full-blown war would be catastrophic and could spiral out of control with the involvement of multiple parties. With Israel's threat of retaliation looming large, the clock is ticking. Preventing such an outcome should be the immediate priority of the major world powers, including the U.S., which has great leverage over Israel, and China, which has a deep influence in Tehran. West Asia is at an inflection point, and the region needs emphatic diplomatic intervention to break out of its conflict loop and dial down the heat.

UK-MAURITIUS TREATY ON CHAGOS ARCHIPELAGO, DIEGO GARCIA: WHAT IT MEANS, WHY IT MATTERS FOR INDIA

The United Kingdom on Thursday (October 3) said it would cede sovereignty of the strategically important Chagos Islands to Mauritius, calling it a "historic political agreement". The UK has long controlled Chagos and the Diego Garcia military base located there, jointly operating it with the United States.

British Foreign Minister David Lammy said the deal settled the contested sovereignty of Britain's last overseas territory in Africa, while securing the long-term future of Diego Garcia. The joint statement from the UK and Mauritius further said the two countries "enjoyed the full support and assistance of our close partners, the United States of America and the Republic of India."

What is the Chagos archipelago?

The Chagos archipelago, comprising 58 islands, lies roughly 500 km to the south of the Maldives archipelago in the Indian Ocean. These islands were uninhabited until the late 18th century, when the French brought in slave labour from Africa and India to work in newly-established coconut plantations. In 1814, France ceded the islands to the British.

In 1965, the UK constituted the British Indian Ocean Territory (BIOT), of which the Chagos Islands were a central part. A few other BIOT islands were later ceded to the Seychelles in 1976 after it gained independence from Britain.

Chagos was attached to Mauritius, another British colony in the Indian Ocean, for administrative purposes. But when Mauritius gained independence in 1968, Chagos remained with Britain. The UK government gave the newly-independent country a grant of 3 million pounds over the "detachment" of the Chagos archipelago.



And what is Diego Garcia?

Behind Britain retaining sovereignty over the Chagos Islands was its strategic location. In 1966, Britain signed an agreement with the US which made the BIOT available for the two countries' defence needs. Land was acquired in 1967, and four years later, the plantation on Diego Garcia — the largest in the archipelago — was shut down.

The BIOT administration then enacted an Immigration Ordinance, which made it unlawful for a person to enter or remain in Diego Garcia without a permit, and enabled the removal of those who remained on the island. Around 2,000 civilians were subsequently kicked out — an issue that has been central to the dispute between the UK and Mauritius.

Diego Garcia became a fully operational military base in 1986. According to an article in the Foreign Policy magazine, "Thanks to its vital location, the island houses a military base that served as a critical node for American air operations during the Gulf War and the wars in Iraq and Afghanistan. Post-9/11, it has also been allegedly used as a detention centre by the [US intelligence agency] CIA."

A statement from US President Joe Biden on Thursday said, "Diego Garcia is the site of a joint U.S.-UK military facility that plays a vital role in national, regional, and global security. It enables the United States to support operations that demonstrate our shared commitment to regional stability, provide rapid response to crises, and counter some of the most challenging security threats we face."

Given the ongoing tensions in West Asia, maintaining a presence in the Indian Ocean remains critical for US interests. Diego Garcia also gives the Americans an outpost to monitor the Malacca Strait, a chokepoint for world trade that is especially vital to China.

Why did Mauritius seek sovereign rights over Chagos?

Mauritius has long claimed that the UK illegally occupies Chagos, and has raised the matter many times in international fora.

In 2017, the UN General Assembly voted to ask the International Court of Justice to examine the legal status of the Chagos archipelago. Two years later, the UNGA adopted a resolution welcoming an ICJ advisory opinion, demanding that the United Kingdom "unconditionally withdraw its colonial administration from the area within six months". Then ICJ President Abdulqawi Ahmed Yusuf had said the detachment of the Chagos archipelago in 1965 from Mauritius was not based on a "free and genuine expression of the people concerned". Chagossians today live in the UK, Mauritius and Seychelles.

What is the significance of the UK-Mauritius treaty?

The agreement between the UK and Mauritius strikes a balance. The UK has ceded claims over the islands, and Mauritius is now "free to implement a programme of resettlement on the islands of the Chagos Archipelago, other than Diego Garcia". The UK has also promised to create a new trust fund "for the benefit of Chagossians".

However, the agreement allows the Diego Garcia base to remain operational for an "initial period" of 99 years. The UK will continue to exercise sovereign rights over the island.



The resolution of the dispute has broader implications. As the Foreign Policy article noted: “A successful resolution to the Diego Garcia spat would affirm Western commitment to a free and open Indo-Pacific. If left unresolved, however, the issue could drive countries such as Mauritius to seek redress with alternative partners like China.”

As a nation formerly colonised by Britain, India has maintained steadfast support to Mauritius’ claims over the Chagos Islands. It voted in favour of the island country at the UNGA in 2019. In recent years, India has attempted to deepen its ties with Mauritius amidst China’s ever increasing assertiveness in the Indian Ocean. Earlier this year, an India-built airstrip and a jetty was inaugurated at Agaléga, a two-island dependency of Mauritius in the Western Indian Ocean.



DreamIAS



NATION

GANDHI EMBODIED PRINCIPLES OF UN CHARTER WELL BEFORE THEY WERE FRAMED

Ban Ki-Moon writes: Mahatma Gandhi's philosophy, vision, and strategy of non-violence have influenced many global leaders, including Martin Luther King Jr. and Nelson Mandela. They have also inspired me deeply.

— In modern times, Gandhi remains the greatest teacher and practitioner of non-violence. He demonstrated the efficacy of this philosophy through his resolute leadership of India's struggle for independence from British colonial rule.

— Gandhi lived by the conviction that only peaceful tactics could usher in a peaceful future. For him, means and ends were one. Non-violence confounds those who face it — and that is why it works. I recall the example of King Ashoka who renounced violence, embraced Buddhism and devoted his life to peace. Gandhi carried on this great Indian practice.

— What are the major challenges and problems that we, as humanity, are currently facing in the 21st century? What are the main lessons we can learn from the past, and what are the main opportunities in the present which can help us overcome those challenges so we can create a brighter world for our future generations?

— Indeed, there is great strength in diversity, and countries that celebrate diversity, defend democracy, ensure freedom of faith, and embrace every individual are the ones that can guide the construction of a better future for all. This is perhaps the most fundamental lesson that we all should learn from Mahatma Gandhi's exemplary life.

For Your Information:

— Gandhi's vision for the upliftment of women was a curious mix of promoting women's political mobilisation, self-reliance, and economic independence, while focussing on traditional feminine virtues such as purity, sacrifice, and service. He often addressed these issues in his several writings, particularly in his weekly newspaper Navjivan.

— One of Gandhi's greatest contributions concerning women was encouraging their large-scale participation in the national movement. The first instance of Gandhi coming to terms with the power of women in politics can be seen in South Africa.

— Although Gandhi encouraged women to come out of their domestic roles, his insistence on 'pure' and 'virtuous' womanhood also restricted their opportunities for action.

PM MODI SAYS INDIA TRUSTED PARTNER IN JAMAICA'S DEVELOPMENT JOURNEY

India has been a "trusted partner" in Jamaica's development journey and it is ready to share expertise in areas, including digital public infrastructure, biofuel, innovation and health with the nation, PM Narendra Modi said Tuesday, after talking with Jamaican counterpart Andrew Holness.

— The Jamaican PM expressed his country's desire to strengthen cooperation with India in sectors, including science, technology, engineering, mathematics, education, digitalisation, security, and energy.



— The PM also identified organised crime, drug trafficking, terrorism as common challenges facing both nations.

— Modi also announced that the road in front of the Jamaica High Commission in New Delhi has been named 'Jamaica Marg'.

— “The people who went to Jamaica from India about 180 years ago laid a strong foundation for our ‘People to People’ ties. The nearly 70,000 people of Indian origin who consider Jamaica as their home are a living example of our cultural heritage...” Modi said.

For Your Information:

— The term diaspora traces its roots to the Greek diaspeiro, which means dispersion. The Indian diaspora has grown manifold since the first batch of Indians were taken to counties in the east pacific and the Caribbean islands under the 'Girmitiya' arrangement as indentured labourers.

— The 19th and early 20th centuries saw thousands of Indians shipped to those countries to work on plantations in British colonies, which were reeling under a labour crisis due to the abolition of slavery in 1833-34.

— Overseas Indians are classified into three categories: Non-Resident Indians (NRI), Persons of Indian Origin (PIOs), and Overseas Citizens of India (OCIs).

EXPRESS VIEW ON YUNUS'S US VISIT: WINNING BACK WEST'S GOODWILL

By most accounts, Muhammad Yunus, Nobel laureate and head of the interim government in Bangladesh, had a successful diplomatic outing in the US. Apart from speaking at the UN General Assembly, he held an impressive number of meetings, including with US President Joe Biden, former President Bill Clinton, Secretary of State Antony Blinken, Canadian PM Justin Trudeau, President of the European Commission and the heads of the World Bank and ADB. A near singular theme emerged from the talks — the West, including and especially the US, is willing to extend support to the post-Sheikh Hasina regime in Dhaka. Yunus also met Pakistan PM Shehbaz Sharif and Chinese Foreign Minister Wang Yi. Reportedly, Sharif and Yunus discussed the deepening and restoration of bilateral ties, as well as the revival of SAARC. Delhi must read the tea leaves after Yunus's visit, and it must deal in a mature and practical manner with the new reality.

The overtures to Pakistan seem to confirm that the Jamaat-e-Islami may now be more central to the Bangladesh government. This confirmation of Delhi's fears, however, does not change the reality on the ground. The fact remains that the interim government seems to have popular political legitimacy, and that Delhi will not have a veto over Dhaka's ties with Islamabad. However, Yunus addressing the UNGA in Bengali is also a reminder that linguistic identity is still central in Bangladesh and that political change must not be viewed through the prism of religion alone. Doing so is counterproductive, runs the risk of bringing out the worst tendencies of Partition, and constrains Delhi's space for engagement. Statements made in the heat of political campaigns by ruling party politicians in India, which have invited protests from Dhaka, can have consequences in a connected world.

JAISHANKAR: GOING FOR MULTILATERAL EVENT, NOT TO DISCUSS INDIA-PAK TIES

A day after the government announced that External Affairs Minister S Jaishankar will lead the Indian delegation to Pakistan for a meeting of the Shanghai Cooperation Organisation's Council of

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Heads of Government on October 15-16, the Minister said he wasn't going there to discuss India-Pakistan relations but for a "multilateral event".

— The External Affairs Minister highlighted that the SCO Summit is taking place in Islamabad this time, because, similar to India, Pakistan too, is a recent member of the bloc.

— In August this year, Pakistan, which holds the rotating chairmanship of the SCO CHG, said it had extended invitations to all heads of government of the SCO member states, including Prime Minister Narendra Modi, for the meeting in Islamabad.

— Framing India's approach, the External Affairs minister said that "India would certainly like to have (a) good relationship, but that cannot happen by overlooking cross-border terrorism and indulging in wishful thinking."

to see at least where we can make a difference and do what we can," Jaishankar said.

For Your Information:

— The Shanghai Cooperation Organisation (SCO) is a permanent intergovernmental international organisation. The main objectives of the SCO are to promote good relations among member countries, strengthen mutual confidence, make collective efforts to maintain peace, security, and stability in the region, and promote effective cooperation in various fields such as trade and economy, science and technology, culture, energy, transportation, tourism, environmental protection, etc.

— The member countries are India, Iran, Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan, Uzbekistan, and Belarus. Belarus joined SCO as the 10th member on 4th July 2024. Afghanistan and Mongolia hold Observer Status.

UN EXPERT CRITICISES PUNITIVE DEMOLITION BY STATES

United Nations Special Rapporteur on Adequate Housing Balakrishnan Rajagopal has told the Supreme Court that the State-driven, punitive and arbitrary demolition of homes and commercial establishments is an "aggravated form of human rights violation".

The Rapporteur, in an application on Friday, pointed to the danger of using punitive demolition by the State as a tool for land-grabbing. "All arbitrary demolitions are *void ab initio* in law, and no legal title or right may be changed on the site where a demolished structure stood. This is an important guarantee to ensure that in the guise of demolitions for technical breaches of the law, land grab from vulnerable individuals and communities is not condoned," he pointed out.

The court had ordered a stay on illegal demolitions using bulldozers on September 17 in a hearing that witnessed scathing remarks from Justice Viswanathan, who criticised States such as Uttar Pradesh for "glorification, grandstanding and even justifications" for razing the private homes and properties of undertrials and their immediate family members.

Mr. Rajagopal said punitive demolitions amounted to "cruel, inhuman, degrading treatment or punishment". Demolition of private property as a means of crime control and maintenance of public order was simply illegal, he submitted.



‘Over 7 lakh evicted’

The Rapporteur stated that India was witness to a “worrying rise of evictions of mostly marginalised and poor communities in recent years”.

“Data reveal that from January 1, 2022, to December 31, 2023, around 7.4 lakh people lost their homes as a result of State-driven demolitions. The scale and pace of these evictions reached unprecedented levels in 2023, with 5,15,752 people evicted and 1,07,449 homes demolished across the country. The data also reveal that 31% of the people forcibly evicted during this period belonged to historically marginalised groups, including the Scheduled Castes, Scheduled Tribes, Other Backward Classes, nomadic communities, migrant workers, and religious minorities,” Mr. Rajagopal reported.

Resolutions of the United Nations Commission on Human Rights and Article 17 of the International Covenant on Civil and Political Rights (ICCPR) say that “no one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation”. The right to security of tenure and freedom from the threat of forced eviction are recognised as fundamental human rights under the International Covenant on Economic, Social and Cultural Rights (ICESCR). India is a party to both ICCPR and ICESCR.

WILL PROTECT CONVICTS TOO FROM PUNITIVE DEMOLITIONS: SC

The Supreme Court on Tuesday promised to protect even convicted criminals from State-sponsored punitive demolition of their legal private property, but refused any kind of immunity to public space encroachers, whether they be Hindus or Muslims.

A Bench of Justices B.R. Gavai and K.V. Viswanathan said a conviction or being accused of a crime was no ground for States to bulldoze private homes and shops. The court, which has proposed to frame pan-India guidelines to protect private property from illegal and targeted demolitions, also said it would not condone or shield encroachments.

“We are a secular country... Whatever we lay down, we lay down for all citizens. There cannot be a particular law for a particular religion. Unauthorised constructions belonging to members of any community have to go,” Justice Gavai observed.

The Bench was hearing petitions accusing States like Uttar Pradesh of misusing municipal laws to bulldoze the private property of members of minority communities. The petitions argued that municipal laws were misused for crime-fighting and grandstanding by ruling parties in these States. Justice Viswanathan pointed out during the hearing that there have been 4.45 lakh demolitions in recent years.

Solicitor-General Tushar Mehta, appearing for Uttar Pradesh, Madhya Pradesh and Rajasthan, agreed that even conviction in heinous offences such as rape, murder and terrorism should not lead to punitive demolition.

However, he said demolitions under municipal laws must not always be given a communal colour. The law officer expressed an apprehension that the top court’s intervention on the basis of a few illegal demolitions may work to encourage encroachments and paralyse ‘genuine’ demolition of unauthorised structures across the country.



Public interest

“Any religious structure in the middle of a public road, be it a dargah or some temple, it has to go... For us, public safety and public interest are paramount,” Justice Gavai said, clarifying that the court’s ambit was confined to illegal State demolitions.

Justice Viswanathan illustrated how State action should not display obvious discrimination. “The real problem is, let’s say, there are two structures having violations. But proceedings are initiated [under the municipal law] against only one. You find that the owner or occupant of that structure was accused of a criminal offence just before the proceedings started. Now, that is the issue. Proceedings happen only with this one structure, while the other one remains intact,” Justice Viswanathan explained.

The court finally reserved the case for judgment.

SC DECLINES TO HALT GIR SOMNATH DEMOLITIONS, WARNS OF RESTORATION IF RULING VIOLATED

The Supreme Court told authorities in Gujarat Friday that it will order the restoration of razed “encroachments” in Gir Somnath district if it finds they have not followed its September 17 interim direction that ordered a pause in demolitions across the country, with some exceptions.

The two-judge bench headed by Justice B R Gavai, however, declined to direct a status quo on the demolitions.

“If we find that they are in contempt of our order, we will ask them to restore the status quo ante,” said Justice Gavai, while declining to issue a notice in the matter.

The bench, also comprising Justice K V Viswanathan, was hearing a petition filed by Summast Patni Musslim Jamat, a trust representing the Patni Muslim community of Prabhas Patan, against the demolition drive carried out in the area close to Somnath temple last month.

Appearing for the trust, Senior Advocate Sanjay Hegde said some of the structures are very old and the notices issued to the occupants did not mention demolition. He also alleged that the demolition drive was in violation of the interim order passed on September 17. He also sought status quo, saying the remaining structures, too, may be demolished.

Solicitor General Tushar Mehta, appearing for Gujarat, said the action squarely fell within the exceptions provided in the September 17 order.

In its September 17 interim order, the top court said: “Till the next date of hearing, we direct that there shall be no demolition anywhere across the country without seeking leave of this Court. We further clarify that our order would not be applicable if there is an unauthorised structure in any public place such as a road, street, footpath, abutting railway line or any river or water bodies and also to cases where there is an order for demolition made by a Court of law.”

The order came on petitions which alleged that municipal authorities in various states were employing demolitions as a crime-fighting measure by razing dwelling units of accused people.

Mehta said the encroachments in Gir Somnath abutted a waterbody — the sea — and that due procedure was followed.



He said that it was government land and eviction proceedings were started in 2023. Notices were issued and a personal hearing was given to the parties, he submitted.

Following the submission, the bench said that it was not issuing notice but asked the SG to file his response to the petition.

The petitioners opposed the SG's contentions but the bench pointed out that its interim order had an exception in the case of water bodies.

Note

- 800 cops and dozens of excavators were deployed in a demolition drive near Somnath Temple.
- It is an important Hindu pilgrimage located in Prabhas Patan, Veraval, in Gujarat.
- According to the temple website, it is “the holy place of the First Aadi Jyotirling Shree Somnath Mahadev.”
- The temple faced a serious attack in 1026 CE by Mahmud of Ghazni during the reign of Bhima I.
- According to an inscription, Kumarapala (r. 1143–72) rebuilt the Somnath temple in 1169. He replaced a decaying wooden temple.
- During its 1299 invasion of Gujarat, Alauddin Khalji's army, led by Ulugh Khan, defeated the Vaghela king Karna, and sacked the Somnath temple.
- In 1395, the temple was destroyed for the third time by Zafar Khan, the last governor of Gujarat under the Delhi Sultanate and later founder of the Gujarat Sultanate.
- According to the temple website, in 1782, Maratha queen Ahalyabai Holkar built a small temple at the site.
- After Independence, Sardar Vallabhbhai Patel announced the decision to reconstruct Somnath at a huge gathering in Junagarh.

CASES CAN'T BE LODGED AGAINST JOURNALISTS FOR CRITICISING GOVT.: SC

The Supreme Court on Friday said criminal cases could not be slapped on mediapersons perceived as critical of the government while barring the Uttar Pradesh Police from taking coercive steps against a journalist for his article about a “casteist tilt” in the deployment of officers occupying key positions in the Yogi Adityanath administration.

“In democratic nations, freedom to express one's views is respected. The rights of the journalists are protected under Article 19(1)(a) of the Constitution. Merely because writings of a journalist are perceived as criticism of the government, criminal cases should not be slapped against the writer,” a Bench of Justices Hrishikesh Roy and S.V.N. Bhatti underscored in its judicial order.

Abhishek Upadhyay, represented by advocate Anoop Prakash Awasthi, said the article saw the Uttar Pradesh Police register a “frivolous” FIR against him under various provisions of the Bharatiya Nyaya Sanhita and Section 66 (computer-related offences) of the Information Technology Act.



The journalist, in his petition, said the very prelude of the FIR “compares the current Chief Minister of Uttar Pradesh as incarnation of God and hence immune from any critical analysis of the caste dynamics in his general administration”.

The FIR was quoted by Mr. Upadhyay saying, “Honorable Yogi Adityanath Maharaj Ji is like an incarnation of God. The Indian territory among all the Chief Ministers of various States in India, none even come close to Maharaj Ji in terms of popularity. Maharaj Ji has the highest number of followers on the social media platform X compared to any other Chief Minister in India. Since Maharaj Ji became Chief Minister, Uttar Pradesh has reached the top position in India concerning law and order. Uttar Pradesh has excelled in many fields at the national level under his leadership. Since he renounced worldly life, he no longer belongs to any caste; he is simply a *sanyasi* (monk)...”

The petition said a “journalist’s duty is to serve the truth, to hold power accountable, and to inform the public without fear or favour”.

EXPRESS VIEW ON CRACKDOWN ON NGOS: THE LONG ARM OF IT DEPARTMENT

The Income Tax department’s crackdown on five NGOs — including one of the country’s most respected public policy think tanks, the Centre for Policy Research — reeks of disquieting overreach. It is a heavy-handed bid to shrink spaces for free expression and civil society action in a democracy. As a report in this paper has shown, the “intimation letters” issued to the NGOs are loose and voluminous, straying far beyond the I-T department’s remit. On the one hand, they seek to weaponise the rule book’s fine print against the targeted NGOs. And, on the other, they indulge in free-style spectre-painting and broad-brush conspiracy-mongering. There are several pointed references to “foreign funding”, unsubstantiated allegations that it was being “misused” for, at the very least, “activities contrary to the objects for which they (the NGOs) were formed”, and, in fact, to fulfil agendas that seek to stall this country’s “economic development projects”. The I-T department does not just go beyond its mandate of assessing and collecting taxes by arrogating to itself the onerous responsibility of safeguarding “national interest” from NGOs allegedly bent on hurting it. It also sees inter-connections and linkages of processes and personnel between these separate entities where none exist, and tries to paint in sinister hues those that do.

Several concerns are sparked by the I-T department’s bid to squeeze the living spaces of these NGOs, by surveys, summons and bulky notices. In tandem with a freeze on inflow of foreign funds through suspension of their FCRA registration, it is a two-pronged attack that is designed to wound, if not to kill. To begin with, the indiscriminate sighting and demonisation of the “foreign hand” is strikingly outdated and ill-fitting in a country that celebrates foreign direct investment in other sectors and congratulates itself for seizing its opportunities in an increasingly interconnected global economy. There is also a larger distrust at work here that is even more disturbing. The ruling establishment at the Centre, now in its third term, has been visibly ill at ease with civil society actors. Be it think tanks and research institutions and universities, or protests and agitations geared towards a specific governance cause or policy goal, the onus has been on them to prove their innocence. They have been called upon to perform their allegiance to a “national interest” defined by the powers-that-be. This constant baiting by the state of non-governmental organisations and institutions that are autonomous and outside its direct control, its insecure and restrictive view of their legitimate activities, is taking a toll. After all, a deliberative democracy thrives on ideas and innovation, it needs free and open spaces to spread and grow.

The I-T department must be reined in by those who pull its strings. NGOs must be allowed to do their work without constantly looking over their shoulders. The country’s coal mines and thermal



power plant projects that the I-T department seems to be so protective about will go on. Development is not threatened by the People. It certainly does not require the taxman's ministrations. Surely, corporates like the Adani Group and JSW, the two named in these reports, can and should address legal challenges to their projects — the Income Tax department should not behave like their hired gun.

WHY HAS THE SC CLARIFIED POCSO PROVISIONS?

The story so far:

In a far-reaching verdict that clarifies the penal consequences of dealing with online sexual material involving children, the Supreme Court has underscored that viewing, downloading, and storing of such content are all offences under the Protection of Sexual Offences Against Children (POCSO) Act, and that criminal liability not be limited to creating, uploading and transmitting the material.

How did the matter reach the Court?

An alliance of non-government organisations filed an appeal before the top Court against a Madras High Court order quashing criminal charges against a young man who was sought to be prosecuted for viewing and storing video clips featuring children being exploited for sexual acts. The police had booked him after getting information from the National Crime Records Bureau (NCRB) that the accused had downloaded the material on his mobile phone. The police later filed a charge-sheet under Section 67B of the Information Technology Act, 2000, and Section 15(1) of POCSO.

Section 67B, introduced in the IT Act in 2009, provides for a jail term up to five years for the first offence, and up to 10 years for a subsequent offence that involves publishing or transmitting material depicting children in sexual acts in electronic form. It also allows for a fine of up to ₹10 lakh. Section 15(1) provides for a three-year jail term for those storing child pornographic material for commercial purposes. Subsequently, Section 15 was expanded to include other forms of offences related to online content on child sex abuse. The organisations were aggrieved by the High Court's order invalidating the criminal case, and were allowed to file an appeal, even though they were not parties in the original case.

What did the High Court order say?

The High Court ruled that mere possession or storage any pornographic material was not an offence under POCSO. Further, it said Section 67B of the IT Act only made transmission, publication or creation of material depicting children an offence, but mere watching or downloading of child pornography in the private domain was not punishable. Hence, it quashed the case, holding that no offence had been committed either under POCSO or the IT Act. In other words, possession and storage of such material would not be a crime, but transmission or publication would be an offence.

How did the top Court deal with the ruling?

The Supreme Court held that the High Court decision was erroneous. It proceeded to clarify the scope of the various offences under Section 15 of POCSO, which had been amended in 2019 to penalise various acts relating to child sexual abuse material. It explained that the amended section provided for three distinct offences relating to sexually exploitative material concerning children.



Section 15(1) penalises the failure to delete, destroy or report any child pornographic material found to be stored or in possession of any person with an intention to share or transmit it. Sub-section (2) makes it an offence to transmit, propagate, display or distribute child pornography. The third limb of the section seeks to punish storage or possession when done for commercial purposes.

What is 'constructive possession'?

The Supreme Court has invoked the concept of 'constructive possession' to explain the severity of the offence after the word "possession" was included in addition to "storage" in the 2019 amendment to the section on child pornography. It termed the possession or storage of child sexual abuse material as an "inchoate" offence, a criminal act done in preparation for a further offence. It explained that "constructive possession" extended the concept of possession beyond physical control to situations where an individual has the power and intention to control the contraband, even if not in immediate physical possession. "...wherever a person indulges in any activity such as viewing, distributing or displaying etc. pertaining to any child pornographic material without actually possessing or storing it in any device or in any form or manner, such act would still tantamount to 'possession' in terms of Section 15 of the POCSO, if he exercised an invariable degree of control over such material...," the court said.

What are the court's suggestions?

The principle that underpins the decision is that POCSO is a special legislation enacted to punish aggravated forms of offences related to sexual abuse and exploitation of children. Arguing that the term 'child pornography' trivialises the element of exploitation, the court has suggested the use of the term 'child sexual exploitative and abuse material' (CSEAM) instead.

SC OPENS IIT DOOR FOR STUDENT WHO COULD NOT PAY FEES ON TIME

The Supreme Court on Monday came to the rescue of a student, the son of a daily wager and a member of a Scheduled Caste community, who missed admission to the Indian Institute of Technology (Dhanbad) due to his inability to pay ₹17,500 as fees on time before the admission portal closed.

"He is a brilliant student. No child seeking education should go back disappointed from the Supreme Court," Chief Justice D.Y. Chandrachud, heading a three-judge Bench, said. The court exercised its extraordinary power under Article 142 of the Constitution to open the doors of IIT Dhanbad to Atul Kumar, who was present in the courtroom.

Mr. Kumar had secured a rank of 1,455 for the JEE (Advanced) 2024 in his category. He had been allotted a seat at IIT Dhanbad for the four-year Bachelor of Technology course in Electrical Engineering.

It was his second and final shot at securing admission.

The court noted that Mr. Kumar had struggled against the odds of his life to achieve his dream to study at an IIT. The family income was below the poverty line. He had studied in a higher secondary school at Muzaffarnagar in Uttar Pradesh. He had logged in to the admission portal on June 24 after his parents somehow managed to collect ₹17,500. However, the portal closed by the time he could complete filling in his details. After his attempts to communicate his quandary with



the exam authority IIT Madras, Mr. Kumar approached the Madras High Court through legal aid. The High Court advised him to appeal to the Supreme Court for relief.

“Affirmatively, he is a talented student who belongs to a marginalised community and who has done everything to secure admission. Our power to do substantive justice under Article 142 is precisely for situations like this,” the Chief Justice noted. “All the best,” he wished Mr. Kumar at the end of the hearing.

Mr. Kumar is one of three brothers. His siblings are studying in IIT Kharagpur and NIT Hamirpur.

WHEN JAGGI VASUDEV’S DAUGHTER IS MARRIED, WHY IS HE TELLING OTHERS TO BE HERMITS: HC

When Jaggi Vasudev, alias Sadhguru, of Isha Foundation had got his daughter married and ensured that she was well-settled in life, why was he encouraging other young women to tonsure their heads, renounce worldly life, and live like hermits at his yoga centres, asked Justices S.M. Subramaniam and V. Sivagnanam of the Madras High Court on Monday.

The judges raised the question during the hearing of a *habeas corpus* petition filed by S. Kamaraj, 69, a retired professor of the Tamil Nadu Agricultural University in Coimbatore. The petitioner had claimed that two of his well-educated daughters, aged 42 and 39, respectively, had been “brainwashed” into living at the Isha Yoga Centre permanently. Both the alleged detainees, however, appeared before the Division Bench on Monday and made it clear that they were residing at the yoga centre on the Velliangiri foothills in Coimbatore of their own volition.

Nevertheless, after interacting with them, the judges decided to probe the issue further.

Surprised by their decision, advocate K. Rajendra Kumar, representing Isha Foundation, said the court could not expand the scope of the case. However, Justice Subramaniam said the court, exercising the writ jurisdiction under Article 226 of the Constitution, was expected to do complete justice, and it was necessary to get to the bottom of the case.

The judge also said the court had certain doubts regarding the case. When the advocate sought to know what they were, Justice Sivagnanam said, “We want to know why a person who had given his daughter in marriage and made her settle well in life is encouraging the daughters of others to tonsure their heads and live the life of a hermitess.”

‘We want to do justice’

When the advocate replied that an adult was free to choose their own path in life, and that he could not understand the court’s doubt, Justice Subramaniam said, “You will not understand because you are appearing for a particular party. But this court is neither for nor against anybody. We only want to do justice to the litigants.”

When the petitioner’s daughters sought to make their submissions, the senior judge in the Bench said, “You claim to be on the path of spirituality. Don’t you think that neglecting your parents is a sin? We could see so much of hatred in you for your parents.”

On being told by the petitioner’s counsel, M. Purushothaman, that there were multiple criminal cases involving Isha Foundation, and that recently, a doctor serving there had been booked under the POCSO Act, the judges directed Additional Public Prosecutor E. Raj Thilak to file a status report by October 4, listing all the cases related to the foundation.



In his affidavit, the petitioner alleged that some kind of food and medicine was being administered to his daughters, which made them lose their cognitive faculties.

WAS ANIMAL FAT PRESENT IN TIRUPATI LADDUS?

The story so far:

Laddu prasadam from the temple town of Tirupati have left a bad taste after reports that the ghee from cow milk, the traditional ingredient, may have been adulterated with fat from multiple sources including beef tallow.

What are the allegations?

A technical report from the Centre for Analysis and Learning in Livestock and Food (CALF) of the National Dairy Development Board, which analysed samples of ghee supplied to the Tirumala Tirupati Devasthanams, the manager of the shrine, found that it was adulterated.

There was fat from soya bean, sunflower oil, rapeseed oil, linseed, wheat germ, maize germ, cotton seed, fish oil, coconut and palm kernel fat, palm oil, beef tallow and lard.

While allegations that adulterated ghee was being used for preparing the prasadam have been swirling for months, it was the first time that animal fat — from beef and pigs — was mentioned by no less than Andhra Pradesh Chief Minister, Chandrababu Naidu, at a public forum.

What's the process to find out if milk fat is adulterated?

Milk fat, like all organic fats, consists of triglycerides. They are glycerols connected to fatty acids and the carbon chains that constitute them are a characteristic feature of triglycerides. There are 'short chain,' 'medium chain' and 'long chain' fatty acids defined by the number of carbon atoms in these chains. Milk fat has more than 400 structurally different fatty acids and can combine in various ways to form thousands of triglyceride molecules. Thus, triglyceride patterns in cow ghee differ from the ghee made from goat milk, lard, soya bean or other vegetable oils. Given that cow ghee is expensive, adulterating it with cheaper fat is an age-old practice, and an array of methods have evolved to detect adulteration. For precision, the state-of-the-art method in the dairy industry is the use of gas chromatography. This method can be used to separate the chemical constituents of a sample mixture made up of organic compounds. These machines are expensive and can cost ₹30-40 lakh but are the standard in reputed outlets. Much like an electrocardiogram generates a signal of oscillating waves meant to represent heart beats, the result of a gas chromatography analysis of a sample of ghee is a characteristic wave form that shows the proportion of different types of triglycerides. Pure cow ghee has a characteristic pattern different from vegetable oil or lard (pig fat). For adulteration analysis, the German scientist Dietz Precht, in 1991, came up with a set of five equations. Each of them generated an 's value' (standard value) and can be used to determine specific adulterations. The value from s1 points to adulteration with soya bean, sunflower oil, rapeseed, fish oil; s2 to coconut and palm kernel fat; s3 to palm oil and beef tallow; s4 to lard and s5 to the total adulterated fat in a given specimen. For a ghee sample to be pure cow ghee, all five of these values must lie in a specified range that's within a window of 3 or 4 points to 100. However, even if one of these values lies outside the prescribed range, it points to the presence of a 'foreign fat.' This process is the standard protocol recommended by the International Standards Organisation (ISO) and followed in reputed Indian laboratories such as CALF.



What did the analysis of fat in the Tirupati laddus find?

Two samples of cow ghee were tested. All of the values (s1-s5) in both samples were outside their prescribed ranges. For example, in one of the samples, the s3 value —linked to palm oil and beef tallow — was 22.43, out of the prescribed range of 95.9 to 104.1. However this alone doesn't indicate the presence of beef tallow. "Although individual s-values (i.e. s1, s2, s3 & s4) are more sensitive for certain foreign fats than the general s-value (s5), the positive result obtained in only one s-value does not allow to draw a conclusion on the type of foreign fat," says a review of the Precht method in the *Indian Journal of Dairy Science* in October 2023 by K.D. Aparanthi, of the Anand Agricultural University, and co-authors. "...In actual practice, particular foreign fat generally remains unknown, since most of the foreign fats are identified by the method as a group and not as a particular foreign fat (except lard). [The] same problem also arises when a blend of foreign fats is mixed in milk fat." Moreover, the number in this case, s3=22.43, doesn't denote a percentage or the quantity of a substance. Under the prescribed tests, the intrusive 'foreign' fat can be calculated when the 's' values exceed 100. This isn't the case for s3, here.

Are there established methods to differentiate the sources of fat?

There are mathematical ways to interpret the individual 's' values to determine the presence of specific kinds of fat but these haven't been specified in the CALF report. While these methods were developed for European cows, applying it to Indian bovines could require changing the 's' values. These can be calculated only after a database on the biochemistry of ghee in Indian cows, which may have different genetics, and Indian tallow is known. "There is wide biological variation within a species. However, using spectography methods we can accurately detect the nature and percentage of adulterants provided good baseline data, specific to Indian conditions, is available," Dr Madhusudhan Rao, scientist at the Centre for Cellular and Molecular Biology, Hyderabad told *The Hindu*.

KEEP GODS AWAY FROM POLITICS, SC TELLS NAIDU

The Supreme Court on Monday said there is currently nothing to show that animal fat was used in the preparation of Tirupati *laddus* during the previous YSRCP regime in Andhra Pradesh.

The court said Andhra Pradesh Chief Minister N. Chandrababu Naidu should have "kept the gods away from politics" before rushing in to make public statements based on unsure facts that lard was used to prepare the *laddus* in the previous regime.

A Bench of Justices B.R. Gavai and K.V. Viswanathan said Mr. Naidu behaved inappropriately for a high constitutional functionary.

The court pointed out that the Andhra Pradesh government had constituted a Special Investigation Team (SIT) to probe allegations of contamination in the *prasadam* only on September 26. The FIR was lodged on September 25. Yet Mr. Naidu had rushed to the media on September 18 without any proof.

"We are *prima facie* of the view that when investigation is under process, it was not appropriate on the part of a high constitutional functionary to go public and make a statement which can affect the sentiments of crores of people," the court observed.



The Bench orally asked the SIT to “hold its hands” till October 3, the next day of hearing. It requested Solicitor General Tushar Mehta to assist the court in examining whether the SIT should continue or the probe ought to be transferred to an independent Central agency.

Justice Viswanathan noted that test reports available in the public domain did not *prima facie* indicate the use of animal fat in the *laddus*. “As we stand today, there is nothing to show that the ghee used was contaminated,” the judge said.

Justice Gavai asked whether the samples sent for the tests were taken from the same ghee used for the *prasadam*. “You should have at least kept the gods away from politics,” Justice Gavai told the State, represented by senior advocate Mukul Rohatgi.

The court referred to media reports quoting the Chief Executive Officer of the Tirumala Tirupati Devasthanam (TTD), which manages the famed temple, categorically denying any abuse of the ghee used in the *prasadam*.

“He said in fact that contaminated ghee was never used... 100%,” Justice Gavai said.

Senior advocate Siddharth Luthra, appearing for TTD, said the *laddus* were not “tasting right” and complaints were getting more frequent.

“Was the *laddus* which tasted wrong sent for testing then?” Justice Gavai asked Mr. Luthra.

Mr. Rohatgi said the petitions, including one by a former Rajya Sabha Member, were not filed with bona fide intentions. They were only meant to attack the current State government.

The petitions have sought an independent inquiry into the allegations and the setting up of a regulatory mechanism for religious affairs and the manufacture of the *prasadam*.

HOW INDIA’S TEMPLES ARE RUN

As the Supreme Court hears petitions seeking a court-monitored probe into the alleged adulteration of the ghee in Lord Venkateswara’s *laddu prasadam*, Hindu organisations have revived their demand to free temples from government control.

— Muslims and Christians manage their places of worship and religious institutions through boards or trusts run by the community. In the case of many Hindu, Sikh, Jain, and Buddhist places of worship, however, the government exercises considerable control.

— Temples in Tamil Nadu are managed by the state’s Hindu Religious and Charitable Endowments (HR&CE) department. The AP government controls and appoints the head of the Tirumala Tirupati Devasthanams (TTD), which runs the Tirupati Temple.

— States use a part of the income from offerings and donations at large temples for the administration and upkeep of those and smaller temples, and for welfare activities that may or may not be connected to the temple — such as running hospitals, orphanages, or schools/ colleges that provide secular education.

— States draw their power to enact such legislation from Article 25(2) of the Constitution, under which a government can make laws “regulating or restricting any economic, financial, political or other secular activity which may be associated with religious practice”, and “providing for social



welfare and reform or the throwing open of Hindu religious institutions of a public character to all classes and sections of Hindus”.

— Religious endowments and institutions are in List III (Concurrent List) of the Seventh Schedule, which means both the Centre and states can legislate on the subject.

— The historical evidence for the construction of monumental temples dates back to the Mauryan period (321-185 BCE)...

— In the medieval period, invaders repeatedly attacked and pillaged India’s fabulously wealthy temples. The colonial rulers sought to control them — and between 1810 and 1817, the East India Company enacted a series of laws in the presidencies of Bengal, Madras, and Bombay, giving themselves the right to interfere in the administration of temples, purportedly to prevent the misappropriation of their income and endowments.

— In 1863, the British enacted the Religious Endowments Act, which handed over control of temples to committees set up under the Act. However, the government retained considerable influence through judicial jurisdiction...

— After Independence, the 1925 Act became the blueprint for various states to enact their own laws to administer temples. The first such Act was the Madras Hindu Religious and Charitable Endowments Act...

— It has been argued that government intervention is necessary to ensure that all castes are allowed entry into Hindu places of worship.

For Your Information:

Legal position on this issue:

— In the 1954 Shirur Mutt case, the Supreme Court held that a law that takes away the right to administration of the religious denomination and vests it in another authority would be violative of the right guaranteed under Article 26(d)...

— In Ratilal Panachand Gandhi vs. The State of Bombay (1954), the Supreme Court said that in matters of religion, the right of management given to a religious body is a fundamental right that no law can take away...

— In Pannalal Bansilal Pitti vs State Of Andhra Pradesh (1996), the SC upheld the validity of a law that abolished the hereditary right over chairmanship of a trust administering a Hindu religious institution or endowment, and also rejected the contention that the law must uniformly apply to all religions.

— In 2022, lawyer Ashwini Upadhyay filed a writ petition in the SC to free temples from government control. The SC, however, said that under the present arrangement, temples have “catered to the larger needs of society and not only their temple”, and reversing this would “turn the clock back” to the days when “all these temples...these centres of religion, had become places of wealth”. Upadhyay withdrew his petition.

— Sri Venkateswara Temple is constructed in Dravidian style of temple architecture.



GOVT IGNORED NITI RED FLAG THAT DATA PROTECTION LAW COULD WEAKEN RTI

Amid protests from stakeholders including Opposition parties and the civil society on provisions of the Digital Personal Data Protection Act, the government faced some pushback from within as well. Niti Aayog, the top think tank of the government, had opposed some of the provisions of the law, and particularly red flagged the changes proposed to the Right to Information (RTI) Act that could “weaken” the legislation.

In simple words, what the data protection law proposed is an amendment to a section in the RTI Act with such effect that disclosure of personal information about public officials would not be allowed even when these are justified in larger public interest.

On January 16, 2023, the Niti Aayog formally wrote to the Ministry of Electronics and Information Technology (MeitY) urging it to not pass the proposed law in its current form as it could weaken the RTI Act, and suggested the Bill be amended and fresh opinion sought, records reviewed by The Indian Express as part of an RTI application showed.

Niti Aayog’s suggestions had come as part of the then ongoing inter-ministerial consultations, and the law was still in its draft stage. Just two months earlier, MeitY had released a new version of the data protection Bill in November 2022, following which it held a series of private inter-ministerial consultations and public consultations.

The Bill was passed in Parliament in August 2023 and received the President’s assent the same month, but all through the process, MeitY kept the proposed changes to the RTI Act unchanged despite the reservations of Niti Aayog. As of now, the law is yet to be operationalised, with necessary rules for its implementation awaited.

Both Niti Aayog and MeitY are yet to respond to queries sent by The Indian Express.

But two senior government officials, who did not wish to be named, confirmed Niti Aayog’s observations. One official said the reason its recommendations were not accepted is because the Department of Personnel and Training (DoPT), the implementing agency for the RTI Act, had not expressed any concerns regarding the amendments to the RTI Act. The Indian Express has verified during the file inspection that the DoPT indeed did not raise any red flags.

The reason for Niti Aayog’s caution is a single line in the data protection law, that is rather easy to miss as a footnote. The law proposes to amend Section 8(1)(j) of the Right to Information Act, 2005. This prevents a public authority from sharing anyone’s personal information on two main grounds – that the disclosure will have no bearing on any public activity, and that revealing such information would cause unwarranted invasion of the privacy of an individual, unless such disclosure is justified in larger public interest.

However, the law proposes that the personal information of public officials will not be disclosed under the RTI Act. The two key grounds, that such information could be disclosed provided it serves a larger public interest, have been done away with. “In section 8 of the Right to Information Act, 2005, in sub-section (1), for clause (j), the following clause shall be substituted, namely:— “(j) information which relates to personal information,” reads Section 44 (3) of the law.

In its opinion, the Niti Aayog, said the amendment will take away the power of the Public Information Officers “to examine the condition”, which will ultimately “weaken the RTI Act”.



Currently, Section 8(1)(j) of the RTI Act says that “information which relates to personal information and the disclosure of which has not relationship to any public activity or interest, or which would cause unwarranted invasion of the privacy of the individual unless the Central Public Information Officer or the State Public Information Officer or the appellate authority, as the case may be, is satisfied that the larger public interest justifies the disclosure of such information”.

The November 2022 draft version of the data protection Bill also included the clause to amend Section 8(1)(j) of the RTI Act, meaning that the Aayog’s suggestion to remove the provision was not taken into account and the Bill was passed with the provision to amend the RTI Act intact.

The provision to amend the RTI Act was also criticised by the Opposition parties and civil society activists during the consultation period last year and when the Bill came up for discussion in Parliament. To address their concerns then, the government had said the right to privacy afforded by the Constitution was a fundamental right, which should be made available to officers in government institutions as well.

WHY ARE LAW STUDENTS AT RGNUL PROTESTING?

The story so far:

Student-led protests have marred activity at the Rajiv Gandhi National University of Law (RGNUL) after Vice-Chancellor (VC) Professor Jai Shankar Singh allegedly entered the girls’ hostel without prior notice, violating their privacy. Students regard this incident as the last straw in a series of grievances that, in their view, have caused the VC to lose “their mandate” — leading to an indefinite sit-in protest that began on September 22, 2024. Their demands include strengthened campus security, the establishment of a students’ association for improved representation, and the implementation of comprehensive academic reforms.

What happened?

Denying the allegations, Mr. Singh told *The Hindu* that his visit to the first-year female students’ rooms was “at their invitation.” He claimed that an influx of female students this academic year had led to overcrowding in the girls’ hostel, with first-year students being placed in double-occupancy rooms. “These are baseless accusations. I visited the first-year students’ rooms only after they repeatedly complained about the shortage of space. I was accompanied by the chief warden and a female security guard,” he said.

Refuting Mr. Singh’s claim, a fourth-year female student told *The Hindu* that Mr. Singh failed to give either the students or the hostel warden any prior notice of his visit. “According to hostel regulations, access to the girls’ hostel is restricted for male members of the university, and even parents are denied entry unless explicitly authorised. This unannounced visit constitutes a grave breach of our privacy, especially since this is our personal space,” she said.

Students further claimed that the chief warden and a female security guard only arrived to accompany Mr. Singh only after being summoned by the students. “The VC didn’t just visit the first-year students; he also entered the rooms of third-year students. If his intention was solely to address the space issues affecting first-year students, why did he feel the need to enter the rooms of third-year students, who reside in an entirely separate block?” a third-year female student questioned.



However, this is purportedly not the first instance of inappropriate behaviour exhibited by Mr. Singh.

Several students, speaking on the condition of anonymity, alleged that since his appointment in March, he has made sexist and insensitive remarks on multiple occasions. A written representation submitted by the students to the Chief Justice of the Punjab and Haryana High Court — who also serves as the ex-officio Chancellor of the University — attributes numerous instances of moral policing to the VC.

“Ladki ho, domestic violence ya marriage jaisa Act uthao aur aaram se ghar par course karo. Kyu itna complicated aur naya topic leti ho (You are a girl, pick a law like domestic violence or marriage and stay back at home and pursue the course. Why do you opt for new and complicated topics),” Mr. Singh allegedly told some female students, as per the representation accessed by *The Hindu*. Additionally, he reportedly questioned the attire of some female students on one occasion.

Are dialogues underway?

Negotiations between the protesting students and the University administration have repeatedly failed to reach a consensus. Moreover, three faculty members of the nine-member committee constituted to facilitate discussions with the students have resigned without explanation.

Several students reported to *The Hindu* that they have been protesting in sweltering heat and adverse weather conditions, with some even losing consciousness and requiring medical attention. “We tried to arrange for tents, but the university administration intervened and directed suppliers not to honour our requests,” claimed a third-year student.

Students also claimed that the administration contacted their parents to stifle the protests, warning them that their children could face expulsion if they continued to agitate. Mr. Singh, however, denied the allegations and told *The Hindu*, “No calls were made. These are just lies and false accusations.”

Are there other grievances?

This is not the first student-led protest that RGNUL has witnessed. In 2019, approximately 400 students agreed to end a five-day indefinite sit-in only after the administration committed to revoking the suspension of six students who had advocated for improved hostel food, enhanced library access for women, and the removal of discriminatory curfew restrictions in the girls’ hostel. “Our seniors had protested for the establishment of an official students’ association nearly four years ago, yet no progress has been made on that front. It is incredibly difficult to voice our grievances without an official representative body,” a fourth-year student said.

Female students have also voiced concerns regarding inadequate security measures. “Since the university is located on the outskirts of Patiala, the road in front of the campus remains deserted. We have repeatedly urged the administration to install street lights, CCTV cameras, and set up a police outpost near the main gate. But our grievances have been dismissed citing a lack of requisite funds,” a student told *The Hindu*.

In recent times, NLUs — once hailed as “islands of excellence” by former Prime Minister Dr. Manmohan Singh — have witnessed a wave of student protests fuelled by a range of factors such as exorbitant fees, inadequate infrastructure, and administrative apathy. According to Prof. (Dr.) Faizan Mustafa, noted academic and VC of Chanakya National Law University (CNLU), Patna, NLUs witness significantly fewer student protests compared to other universities. “Students in NLUs



generally exhibit far greater restraint and refrain from engaging in any form of violence. They exercise their right to protest peaceably without arms. I do not see any problem with it," he told *The Hindu*.

Dr. Mustafa further opined that students, as primary stakeholders, should play an active role in administrative decision-making. "When it comes to conflict resolution, I believe the responsibility lies with the head of the institution to take the initiative. Throughout my 15-year tenure as the VC of various NLUs, I have never subscribed to the 'control model' of university administration. Involving students meaningfully in administrative decisions fosters trust between them and the administration. Ultimately, universities are better run from classrooms than from the VC's office," he added.

What happens next?

Raj Lali Gill, the Chairperson of the Punjab State Women Commission, has written to President Droupadi Murmu and Prime Minister Narendra Modi recommending the "immediate removal" of Mr. Singh "to restore a safe and respectful environment on the university campus." The recommendation follows her visit to the university, where she met with protesting students and instructed the administration to form a "neutral committee" with student representatives to engage in dialogue.

Additionally, Punjab Chief Minister Bhagwant Mann has reportedly taken cognisance of the students' grievances and assured them of prompt action. Despite Dr. Naresh Vats, the Officiating Registrar of the varsity, announcing that classes would resume on September 27, 2024, students have so far unanimously boycotted them. The University was earlier shut down on account of the ongoing protests.

SC DISMISSES PLEAS TO REVIEW VERDICT UPHOLDING STATES' RIGHT TO TAX MINES, QUARRIES

A nine-judge Bench of the Supreme Court, in a majority decision, has refused to review its July 25 judgment upholding the power of State legislatures to tax mineral-bearing lands and quarries. The review was decided on September 24. It reached public domain on Friday.

The majority led by Chief Justice of India D.Y. Chandrachud had ruled that the power to tax mineral lands and quarries was not the exclusive power of Parliament.

In a replay of the July 25 judgment, the Review Bench, repeated the majority view. The sole dissenting judge on the Bench, Justice B.V. Nagarathna, continued to disagree with the majority view. While the majority on the Bench dismissed the pleas of review by the Union government, Karnataka Iron and Steel Manufacturers Association, and others, Justice Nagarathna found a case for review.

The majority declared "there is no error apparent on the face of the record. No case for review under Order XLVII Rule 1 of the Supreme Court Rules 2013 has been established". In her separate opinion on the review petitions, Justice Nagarathna said they should be heard in open court and issued notice.

The July 25 judgment had freed the States from the restrictions of the Centre. The court had found the States's liberty to tax mines and quarries a part of the federalist principles of governance.



“Any dilution in the taxing powers of the State legislatures will necessarily impact their ability to raise revenues... Fiscal federalism entails that the power of the States to levy taxes within the legislative domain carved out to them and subject to the limitations laid down by the Constitution must be secured from unconstitutional interference by Parliament,” Chief Justice Chandrachud had laid down in the judgment.

CASTE IN JAIL

The most notable aspect of the Supreme Court ruling prohibiting caste-based discrimination in the treatment of prisoners is that it required a judgment from the highest court to end colonial practices and systems in prisons. While the Court has dealt elaborately with specific rules in the jail manuals of various States and the way in which caste-based hierarchy plays a role in allocation of duties, classification of prisoners, and the treatment of certain social groups as “habitual offenders”, it is quite remarkable that prison authorities and State governments had done so little about these aspects since independence. It is as if the prison system has been out of the reach of the core philosophy of the Constitution: the ushering in of an equal society, the ending of all forms of discrimination, the prohibition of untouchability in any form, and the abolition of forced labour and exploitation. Responding to journalist Sukanya Shantha’s writ petition, the Court has analysed the controversial rules and practices in jails in the backdrop of these constitutional objectives. It has ruled such provisions unconstitutional, and directed the revision of prison manuals within three months. Tracing the history of such rules and practices, the Court has noted, with much justification: “In line with their overall approach, the colonial administrators linked caste with prison administration of labour, food, and treatment of prisoners.”

Not only were menial work and supposedly polluting occupations allocated to prisoners from communities placed lower in the caste hierarchy, some were expected to carry out their “hereditary trades” within prisons, the Court found. On the other hand, the caste privileges of a few placed higher were preserved. Few can disagree with the observation that “the notion that an occupation is considered as ‘degrading or menial’ is an aspect of the caste system and untouchability.” The provision that food must be cooked by prisoners from a “suitable caste” and rules that referred to those from the “scavenger class” being assigned tasks such as manual scavenging, sweeping, and cleaning violated the constitutional prohibition against untouchability. Distribution of labour cannot be solely based on birth. Such rules violate the right to dignity and the right against forced labour and exploitation. The Court has also favoured doing away with vague definitions of ‘habitual offenders’, as they seem to ascribe criminal tendencies to whole tribes, even though the idea of notifying ‘criminal tribes’ has long been given up. It is time for State governments to respond to the verdict and revisit their laws and regulations related to prison administration and put an end to systemic discrimination in an institution that may treat any form of resistance as indiscipline.

92% OF WORKERS CLEANING URBAN SEWERS, SEPTIC TANKS BELONG TO SC, ST, OBC GROUPS, FINDS SURVEY

In a first-of-its-kind attempt to enumerate people engaged in the hazardous cleaning of sewers and septic tanks in India’s cities and towns, government data gathered from over 3,000 urban local bodies in 29 States and Union Territories shows that 91.9% of the 38,000 workers profiled so far belong to Scheduled Caste (SC), Scheduled Tribe (ST), or other backward class (OBC) communities.



Of the profiled workers, 68.9% were SC, 14.7% were OBC, 8.3% were ST, and 8% were from the general category.

Between 2019 and 2023, at least 377 people across the country have died from hazardous cleaning of sewers and septic tanks, according to government data tabled in Parliament.

Hazardous cleaning

The profiling of sewer and septic tank workers (SSWs) is being carried out by the Ministry of Social Justice and Empowerment as part of its NAMASTE programme, a scheme to mechanise all sewer work and prevent deaths due to hazardous cleaning work. In 2023-24, this scheme was brought in to replace the Self-Employment Scheme for Rehabilitation of Manual Scavengers (SRMS).

The Union government's rationale is that manual scavenging as a practice has ended across the country and what needs to be fixed now is the hazardous cleaning of sewers and septic tanks. It draws this distinction based on a technical difference in how manual scavenging and hazardous cleaning are defined in the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act.

The NAMASTE programme targets "workers directly associated with sewer and septic tank cleaning including drivers of desludging vehicles, helpers, machine operators and cleaners", the Ministry says.

Its goal is to profile such workers in a nationwide enumeration exercise, give them safety training and equipment, and offer capital subsidies that could turn sewer and septic tank workers into "sanipreneurs", or sanitation entrepreneurs.

Since the scheme began a year ago, 3,326 urban local bodies (ULBs) have begun the process and profiled around 38,000 SSWs. So far, 283 ULBs have reported zero SSWs, and 2,364 ULBs have reported less than 10 SSWs each.

The Ministry of Housing and Urban Affairs estimates that there are 100 core sanitation workers for an urban population of five lakh. Based on this, the government used decadal growth rates to estimate that as of 2021, there are likely to be one lakh sewer and septic tank workers (SSWs) employed by India's 4,800 ULBs. The NAMASTE programme intends to profile all SSWs across the country to create a central database.

State efforts

Twelve States and UTs, including Kerala, Rajasthan, and Jammu and Kashmir, have completed the profiling process, while the exercise is still under way in 17 States, including Andhra Pradesh, Bihar, Gujarat, Uttar Pradesh, Madhya Pradesh, and Maharashtra. Chhattisgarh, Meghalaya, and West Bengal are among the States that have yet to begin the profiling process. Tamil Nadu and Odisha are running their own programmes for SSWs, and are not reporting data to the Centre under this programme.

States such as Kerala and Karnataka are holding information, education, and communication (IEC) campaigns to profile workers at special camps. In Andhra Pradesh, ULBs are visiting workers' homes and workplaces to profile them, with State data showing that around 30% of their profiling was done this way.



By the end of the 2023-24 financial year, 31,999 SSWs had been validated, the Ministry's annual report said. Capital subsidies amounting to ₹2.26 crore have been given to 191 beneficiaries and their dependants for alternative self-employment projects, while 413 sanitation workers and dependants have received capital subsidies of ₹10.6 crore for sanitation-related projects, the report said.

'No more manual scavenging'

Under the previous SRMS scheme, the government had identified 58,098 manual scavengers till 2018. Since then, it has insisted that no other manual scavengers have been identified, claiming that none of the 6,500-plus complaints reporting manual scavenging could be verified.

Of the identified manual scavengers, the government said it had data on the social categories of 43,797, showing that 97.2% of them were from SC communities. The share of STs, OBCs, and others were each around 1%.

Ministry records showed that all the 58,098 people identified as manual scavengers till 2018 had been given a one-time cash transfer of ₹40,000. While 18,880 of them had opted for skills training in alternative occupations, 2,051 had opted for loans under the scheme's subsidies to start alternative businesses as of 2022.

SPLIT DECISION

In the run-up to the impending election to the Maharashtra Assembly, the rivalry between the two factions of the Nationalist Congress Party (NCP), now operating as separate parties, will have its inevitable influence on political developments and electoral outcomes. In the latest development related to the rift, NCP founder Sharad Pawar has approached the Supreme Court for a direction to the NCP led by Ajit Pawar to opt for a new symbol in the Assembly elections. The NCP's 'clock' symbol is with the Ajit Pawar group, following a ruling by the Election Commission of India (ECI) in February, recognising it as the official NCP. There is some logic to the demand that the Ajit Pawar group give up the 'clock' now. The ECI's order has already been challenged in the Supreme Court. Oral observations in early hearings indicated that there are some doubts about the 'legislative majority' test adopted by the ECI while recognising the Ajit Pawar faction as the NCP and allotting the 'clock' to the group. The ECI's order had justified the use of the legislative majority test by observing that the test on which group had organisational majority was inconclusive, as was the test based on the party's 'aims and objectives'. Mr. Ajit Pawar revolted against his uncle and joined the BJP-Shiv Sena alliance and became part of the ruling Mahayuti coalition, while the NCP (Sharad Pawar) is part of the Maha Vikas Aghadi, the opposition combine that includes the Shiv Sena (UBT) and the Congress.

However, in the Lok Sabha elections, Mr. Ajit Pawar's group won only one seat, while Mr. Sharad Pawar's party, using the symbol of a 'man blowing a turha' (trumpet), won eight, besides polling a much higher number of votes. The outcome raises the question whether the legislative majority during a given period could be used to gain or lose recognition. Further, Mr. Sharad Pawar has argued that the 'clock' has been the NCP's reserved symbol for many years and allotting it to one group may cause confusion in the voters' minds. The court will have to decide whether to have a level-playing field by denying the 'clock' symbol to both sides, or let the recognised faction use the symbol as long as the ECI order is in force. Such disputes, including the other major rift in Maharashtra over who represents the Shiv Sena, pose a challenge to the ability of parties to maintain organisational unity in the face of attempts to split them through defection and rebellion.



The fate of the individuals and parties involved often depend on the Speaker under the anti-defection law and the ECI, which accords recognition to parties and allots symbols. Both institutions seem to need the Supreme Court to keep them honest.

1967: INDIA'S LAST 'ONE NATION, ONE ELECTION'

Shyam Lal Yadav writes— “Last time India saw “One Nation, One Election” was in 1967. The country’s fourth general elections involved 520 Lok Sabha constituencies and 3,563 Assembly seats. Polling was largely held during 15-21 February. It was a single-phase election in most of the states, but UP had it in four phases.”

— “The country’s tryst with simultaneous Lok Sabha and Assembly polls started right from the first general elections in 1952, which used to be followed by the elections to the posts of the President and the Vice-President.”

— “Following the 1962 polls, India underwent wide-ranging social and political changes. There was demoralisation due to the India-China war. In May 1964, the country’s first and longest-serving Prime Minister Jawaharlal Nehru passed away. He was succeeded by Lal Bahadur Shastri, who died in Tashkent on January 11, 1966 just after signing a declaration to resolve the 1965 India-Pakistan war.”

— “Amid these crises, Nehru’s daughter Indira Gandhi took charge as the PM on January 24, 1966 by defeating Morarji Desai in the Congress Parliamentary Party (CPP) leader’s election. This created a rift between Indira and the Congress veterans like Desai, which was reflected in the 1967 polls.”

— “Besides the Opposition parties’ campaign against the Congress, there was a rising political assertion by the farming communities in the wake of the Green Revolution. The Opposition parties tried to tap into their discontent, using slogans like Lohia’s “Pichhade Paavain Sau Mein Saath (OBCs must get 60%)” to galvanise these classes, which proved crucial in weakening the Congress in North India. And in states like Tamil Nadu, it was the coalition of the Swatantra Party and the DMK which ensured the Congress’s defeat.”

— “In 1967, the total number of electors in the country was 25.03 crore, while the population was 43.87 crore as per 1961 Census. The citizens above 21 years were eligible voters. The polls saw a turnout of 61.33%, which was highest since 1952. The Congress got a majority in the Lok Sabha by winning 283 seats out of 520, but this was the party’s lowest tally since 1952 even though its vote share was still 40.78%.”

— “Interestingly, in 1967, the Election Commission of India (ECI) was mulling a fixed schedule for the synchronised polls so that governments would not face problems over the commencement of the budget sessions...However, such proposals remained a distant dream as simultaneous elections have not been held in the country since.

For Your Information:

— Simultaneous elections, popularly referred to as “One Nation, One Election”, means holding elections to Lok Sabha, all state Legislative Assemblies, and urban and rural local bodies (municipalities and panchayats) at the same time.



- Currently, all these elections are held independently of one another, following timelines dictated by the terms of every individual elected body.
- The Union Cabinet has cleared the proposal to hold simultaneous elections in India, as recommended by a high-level committee headed by former President Ram Nath Kovind.
- The Kovind committee had recommended simultaneous elections, popularly referred to as “One Nation, One Election” for the Lok Sabha and state assemblies as the first step followed by synchronised local body polls within 100 days.

DECODE POLITICS: WHY BJP GOVT HAS PROMISED STRICTER LAND LAWS IN UTTARAKHAND

A contentious political issue since before Uttarakhand was carved out of Uttar Pradesh 24 years ago, land laws remain a thorny issue in the hill state, despite numerous amendments and policy changes over the years. On September 27, Chief Minister Pushkar Singh Dhami promised a thorough investigation into violations of the state's land purchase regulations and bring in stricter land legislation.

What are the alleged land law violations in Uttarakhand?

As per the current provisions of the Uttarakhand (Uttar Pradesh Zamindari Abolition and Land Reforms) Act, Uttarakhand non-residents can purchase up to 250 square metres of land without permission, while there is no limit for permanent residents. Dhami said the government had come to know that people were circumventing this by buying land under the names of different family members. Dhami said any illegally purchased land would be repossessed by the state.

The CM also said people who had obtained permission to purchase land for business activities such as tourism, industry, and job creation but failed to utilise it for the purpose stated would also face scrutiny. He said the government was preparing a detailed report on these cases.

Why are land laws a touchy subject?

They underline deep-seated concerns about protecting local interests, preserving culture, and maintaining the state's ecological balance.

Over the years, many residents, particularly in the Hill regions, have demanded stricter laws akin to those in Himachal Pradesh, where Section 118 of the Himachal Pradesh Tenancy and Land Reforms Act of 1972 restricts land ownership by non-residents. In Himachal, non-agriculturists, including outsiders and even non-agriculturist Himachalis, cannot freely purchase agricultural land. However, with government permission, land can be acquired for specific purposes such as industry, tourism, or horticulture.

In contrast, Uttarakhand has periodically relaxed restrictions on land purchases by non-residents to promote economic growth, especially in tourism and real estate. This has sparked local unrest, with regular protests and demonstrations against the liberalisation of land laws. These concerns have led to frequent mobilisations, with people taking to the streets, especially as the narrative of “demographic change” in the hills has gained momentum. This fear is fuelled by the belief that “outsiders” are buying up land, altering the social and cultural fabric of the state.

With the Uniform Civil Code (UCC) not bringing the expected political dividends, the BJP is hoping that addressing the land law issue will, particularly in the Hill regions. At the same time, the



challenge is to ensure the economic growth of the state. The Congress is on the same page as the BJP on the issue of amending land laws as it too cannot alienate locals demanding changes.

How did Uttarakhand come to have these laws?

These laws trace their roots to the time when Uttarakhand was still a part of UP. On becoming a separate state in 2000, Uttarakhand retained many land laws from Uttar Pradesh that themselves were shaped by laws inherited from British India. Uttarakhand later made specific modifications to these pieces of legislation to suit its topography and socioeconomic conditions.

Under the Congress-led N D Tiwari government in 2004, significant amendments were made to the land laws, particularly the Uttar Pradesh Zamindari Abolition and Land Reforms Act of 1950. The government relaxed restrictions, allowing non-agriculturists and outsiders to purchase up to 500 square metres of agricultural land, hoping to spur investment in real estate and tourism.

However, this sparked a political and public backlash, especially from locals. The protests were prominent in the hill areas, where communities are tightly knit and the fear of displacement and environmental degradation is high.

The B C Khanduri-led BJP government reduced the permissible land limit for outsiders to 250 square metres to curb land purchases by non-residents, especially in the hill areas. This was welcomed by the hill communities, local activists, and political groups but was criticised by the business community.

In 2017, the BJP government of Trivendra Singh Rawat removed all the restrictions, allowing non-residents to purchase any amount of land with the approval of the district magistrates. The administration saw this as a necessary step to boost economic growth and address the issue of migration from the hills. But this again fuelled local discontent.

What do the present rules say?

In 2021, the Dhama government, facing growing pressure, formed a high-level committee to review the land laws. It also introduced significant amendments to the laws that were primarily aimed at addressing concerns over the unrestricted sale of agricultural land to non-residents of Uttarakhand.

Under these revisions, non-residents looking to buy agricultural and horticultural land were restricted to 250 square metres.

Recently, Dhama said that the 2017 change in rules did not have a positive result and that his government was planning to bring a comprehensive land law in the next Budget Session. Last year, he set up a five-member committee for a detailed study of a 2022 draft report that gave recommendations for amending the land laws.

WHAT SPECIAL STATUS IS LADAKH SEEKING?

The story so far:

Climate activist Sonam Wangchuk was detained on the Delhi border on Monday night as he led a group of protesters to petition the Central government for the inclusion of Ladakh in the Sixth Schedule of the Constitution among other demands for autonomy to the region. Similar demands



have been raised in Arunachal Pradesh and Manipur. These discussions relate to special provisions for various ethnic groups in the Constitution.

What is asymmetrical federalism?

The Indian Constitution follows 'asymmetrical' federalism. Asymmetrical federalism is where some States and areas have more autonomy than others. A classical federation like the U.S. or Australia is a symmetrical federation as all States enjoy the same set of powers and autonomy. In India, there are a few States/ areas that enjoy more autonomy or have special provisions under the Constitution than others.

What is the history of the Fifth and Sixth Schedules?

Tribal populations were never fully subjugated by earlier Muslim rulers before the British. They did not intervene in tribal customary laws or their lifestyles. Till the entry of the British, the tribals were the masters of their forests and ancestral lands. However, the initial British laws and their forest policies affected the tribal way of life. Their traditional rights over forest lands were not recognised and their movement inside forests became restricted. This discontentment resulted in various tribal rebellions like the Kol rebellion (1831-32), Santhal revolt (1885), Munda Rebellion (1899-1900) and Bastar rebellion (1911).

These rebellions culminated in the British policy of 'isolation' towards the tribals, and the creation of 'excluded' and 'partially excluded' areas under the Government of India Act, 1935. The 'excluded' areas mainly consisted of hilly regions in the northeast. In these areas, the power of legislation was in the hands of the Governor. 'Partially excluded' areas consisted of tribal tracts in present day Bihar, Bengal, Orissa, Madhya Pradesh, Uttar Pradesh and Maharashtra. In these areas, central and provincial legislature laws were applicable but with modifications or exceptions as decided by the Governors.

The Fifth and Sixth Schedules have been modelled on the basis of these provisions which allowed 'partially excluded' and 'excluded' areas under the Government of India Act, 1935. The Fifth Schedule is applicable to what are officially called 'scheduled areas' that are declared by the President. The guiding norms for declaring an area as a 'scheduled area' include preponderance of tribal populations, compactness of area, a viable administrative unit like a district or block, and economic backwardness. At present 10 States have such 'scheduled areas.' There are Tribes Advisory Councils (TAC) that are set up in these States, consisting of not more than 20 members, of which three-fourths shall be tribal MLAs from the State. The TAC provides advice pertaining to welfare and advancement of the Scheduled Tribes (ST) in these States. The Governor, subject to the approval of the Central government, shall make regulations for the allotment and transfer of lands among the members of the STs. The Governor shall also regulate the businesses of money-lenders in 'scheduled areas.' The Governor may direct that a particular act of Parliament or State legislature shall not apply or apply with modifications to such 'scheduled areas.'

The Sixth Schedule is applicable to what are officially called as 'tribal areas' in the States of Assam, Meghalaya, Mizoram and Tripura. There are 10 such 'tribal areas' at present in these four States. Autonomous District Councils (ADC) are formed in these 'tribal areas.' These ADCs shall consist of 30 members, where not more than four are nominated by the Governor of the State and the rest are elected by the people. The ADC shall have powers to make laws with respect to the use and management of land, regulate shifting cultivation, inheritance of property, marriage and divorce, social customs etc. These laws take effect after being approved by the Governor. For all such matters, the laws by the State legislature will not be applicable in these 'tribal areas' unless



extended by the ADC. The ADCs are empowered to establish and manage primary schools, dispensaries, roads and waterways in the districts. They can assess and collect land revenue and impose taxes on profession, trade etc. They can grant licences or leases for the extraction of minerals. The ADCs are empowered to constitute village and district council courts for the trial of suits and cases where the parties to the dispute belong to STs within the district.

Thus, the 'tribal areas' included within the Sixth Schedule enjoy greater autonomy through the ADC with more executive, legislative, judicial and financial powers than the 'scheduled areas' of the Fifth Schedule. However, both these areas are aimed at protecting the indigenous culture and interests of STs while integrating them with the mainstream through various developmental policies.

What are special provisions for northeastern States?

Apart from the Fifth and Sixth Schedules, there are special provisions applicable to many of the northeastern States under Part XXI of the Constitution. These are contained in Articles 371A (Nagaland), 371B (Assam), 371C (Manipur), 371F (Sikkim), 371G (Mizoram) and 371H (Arunachal Pradesh). They provide for the protection of local customary laws and practices with respect to Nagaland and Mizoram; mandates committees of MLAs from 'Tribal Areas' and 'Hill areas' in Assam and Manipur respectively; and lists out special responsibilities of the Governors of Sikkim and Arunachal Pradesh for the development and maintenance of law and order.

Are further reforms needed?

Despite these provisions enshrined in the Constitution, there are still further reforms that are required. First, the autonomy of the Fifth and Sixth Schedule areas are more on paper than in actual practice. The regulations made by the Governor in 'scheduled areas' are subject to approval by the Central government. Similarly, the laws made by ADCs in 'tribal areas' are subject to the approval of the Governor of the State. When different parties are in power at the Centre, State as well as ADC, political differences affect the autonomy of these areas. Clear guidelines need to be laid down and followed to uphold the spirit behind the provisions of the Fifth and Sixth schedule. Second, there are numerous ST habitations across the country — both within the 10 States under the Fifth Schedule and other States — that are not notified as 'scheduled areas', thereby denying these areas constitutional rights and protection. These need to be notified as 'scheduled areas' after due diligence. Third, the 125th Constitutional amendment bill (2019) introduced and pending in Rajya Sabha aims to grant more financial, executive and administrative powers to the existing 10 ADCs. The Union government has agreed to form a committee headed by the Minister of State for Home Affairs to resolve the issues that have been holding up the passage of this bill. This process needs to be expedited to the satisfaction of all stakeholders. Fourth, the Arunachal Pradesh Assembly and the Manipur Hill Area Committee for the 'Hill areas' in the State have passed resolutions in recent years for their inclusion in the Sixth Schedule. There is a growing demand for the inclusion of the Union territory of Ladakh as well in the Sixth Schedule. These demands have to be examined promptly and necessary decisions taken at the earliest to protect the interests of the tribals in these areas. Finally, the recognition and vesting of forest rights to tribals under the Forest Rights Act, 2006 should be ensured throughout the country including in the Fifth and Sixth schedule areas.



HEALTHY SIGN

One of the salubrious stories of Indian democracy has always been the regular and uninterrupted conduct of general and Assembly elections across provinces. Jammu and Kashmir (J&K) was an aberration with no Assembly elections which should have been held five years ago. Thankfully, this denial of a key democratic process came to an end after three phases of elections were held across the Union Territory and, provisionally, 63.5% of the electorate turned up to vote. This number is marginally lower than the 65.7% registered in the 2014 Assembly polls (excluding Ladakh). The numbers could go up, but the marginal drop should be contextualised. The turnout in 2014 was a peak ever since the militancy that began in 1987 which had dampened voting numbers across the province in subsequent years. Many changes have happened in the last decade — the Governor dissolved J&K's elected Assembly on November 21, 2018; the province lost its special status a year later and, on its bifurcation into two Union Territories, lost its Statehood; and, a significant delimitation exercise led to new constituencies. But the electoral turnout now is still an encouraging number, considering the fact that the turnout in the general election in April-May 2024 was 58.5%.

Some other distinct patterns are discernible from the provisional turnout figures. Constituencies such as Shopian, Kulgam, Pulwama in south Kashmir and Baramulla in north Kashmir registered definite increases in turnout when compared to earlier Assembly polls. This was largely due to the presence of independent candidates supported by the banned Jamaat-e-Islami J&K in the south and Lok Sabha MP Engineer Rashid's Awami Ittehad Party in Baramulla, leading to greater contestation. The Bharatiya Janata Party (BJP)-led Union government has worked hard to change the political discourse in the Valley and to alter the dynamics of party politics. But if the contests, the political discourse and the turnout are any indication, the elections have not been held according to the script envisaged by the BJP. The electorate has sought to use the elections as a means to voice their grievances with President's Rule in the province — the securitised environment has dampened political activities beyond electoral campaigns. The regional parties have not limited their campaigns to bread and butter issues, also articulating demands for restoration of special status and a permanent solution to what they perceive to be unending conflict in the province. The poll results will indicate whether these demands have found resonance among the electorate, but it suffices to say that the elections herald the possibility of a return to normal democratic politics in J&K, aligning it more closely with the rest of the country.

AN OBSESSION WITH RANKING IS HARMING INDIA'S UNIVERSITIES

In this digital age, we reduce everything to numbers. This trend has consumed the education ecosystem, as seen in the rise of global ranking agencies, which assign ranks to universities across the world every year. India has its own National Institutional Ranking Framework to rank universities in the country.

The purpose of a university is to teach and mentor future citizens; and to acquire and create knowledge through research. Research and teaching are two sides of the education coin: knowledge creation and dissemination. A university needs to excel in both in order to fulfil its obligations to students and society. Through its activities, a university also has social and economic impacts. It is impossible to capture a university's multidimensional nature with a single metric, represented by a global or national rank. Yet, this is what ranking systems claim to do.



Overemphasis on research

The global university ranking system is one-dimensional. It places huge emphasis on research activity. A university's research output is quantified using criteria such as the number of papers published, the impact factor of the journals in which they are published, the amount of research funding acquired, and the number of PhD students who were admitted and graduated. These numbers by themselves cannot capture the quality, content, relevance, and impact of research. Sadly, despite being aware of this flaw in the ranking process, Indian universities are all in the ranking race. A world rank makes the university 'visible' and helps attract international students, world-class faculty, and academic partners, philanthropists, and donors. Universities and the government even tweak or alter policies to improve ranks. A university that is not ranked may as well not exist — such is the power we have accorded to global rankings.

India has bought into the American education system, which is shaped by a strong belief in free market capitalism and unfettered private competition. To help improve the global ranking of India's top universities and premier institutes, the government set up the Higher Education Financing Agency (HEFA) a few years ago. HEFA mobilises market resources to fund the country's global rank-aspiring institutions in the form of repayable loans at competitive interest rates.

In tandem, the government also granted full autonomy to several public higher education institutions. This encompasses financial autonomy as well, which means that the government will cease to support them. In other words, public higher education institutions will need to generate their own funds by enhancing student fees. This is touted as a 'win-win' strategy for both the university and the government: the university has a shot at improving its rank and the government no longer has the onerous responsibility of funding it. But if the race for a global rank sacrifices the essential function of educating students (which is not factored into the ranking process), this is not a meaningful 'win' for either. Importantly, it is also not a 'win' for the economically weaker sections of society.

The importance of teaching and mentoring

The metrics-driven, global rank-aspiring higher educational system has had an adverse impact on the teaching community. The undue emphasis on research to the exclusion of other vital functions, especially teaching, has created a sorry situation in which university job aspirants are often judged by the number of research papers they have produced, the impact factor of the journals they were published in, and the numbers of their citations; and not by their ability to be an effective communicator, teacher, and mentor.

Once selected as a faculty member of the university, the candidate's subsequent career advancement depends on additional metrics such as the amount of research grant funds secured and the number of PhD degrees awarded. This obsession with metrics ignores the faculty member's actual teaching and mentoring capacity as a determinant of career advancement in the higher education ecosystem.

Unlike in the case of research, teaching is not amenable to quantification using metrics. It is the unmeasurable something that metrics cannot deal with. So, the role for teaching has declined in the education system. In fact, in the perspective of a typical university professor, writing a paper or working on a grant application takes precedence over teaching today. Ironically, teaching is a distraction from 'all important' research. University professors have become contractors churning out research papers to improve the university's ranking.



The higher education ecosystem is pervaded by a culture of 'publish or perish' without a meaningful and transparent mechanism for accountability in place. Is this kind of research, at the expense of educating students, really meaningful? Are instances of plagiarism, data manipulation, and other research misconduct emanating from our premier institutes and universities the undesirable and unintended consequences of our pre-occupation with metrics? In these cases, are not the teachers failing in their role as mentors and role models? Students who emerge from this system either quit in disillusionment or end up propagating this situation, propelling us into a downward spiral.

Creating two tracks

There is no doubt that research is the engine that drives growth and innovation, but it cannot be an excuse to neglect teaching, which prepares students for the real world. Universities should consider separate tracks for research-focused and teaching-focused faculty members. Interests of faculty members in these two tracks may extend beyond their primary focus, but they must not be expected to excel in both at all times. Otherwise, there will be scope for resentment and lack of commitment, undermining the very faculty members whose contributions are critical to the university's mission.

Universities must realise that the scientific content of a paper and its possible societal and economic impact are more relevant than the impact factor of the journal in which it is published or the number of citations it garners. Teaching must be recognised as an important function of the university and teachers must be encouraged to improve curricula. Careful, unbiased judgment must replace metrics. Universities must enable a paradigm shift in their institutional culture to value and enable the success of both research and teaching efforts that collectively contribute to their overall mission as being centres of higher education and learning.

The metrics-focused system or 'metricocracy', if you will, which we mistakenly believe is synonymous with meritocracy, has created a situation which implies that education is a market rather than a citizen's right and the state's duty; knowledge is a commodity and not a means of becoming more humane; and students are customers, instead of future citizens. This warped ecosystem views academic rigour as detracting from the business of delivering the product to the customer. It kills creativity and the enthusiasm to learn, does not prepare students for the real world, and is harmful to future generations.

WHAT ARE RETRACTIONS AND WHY DO THEY MATTER?

The story so far:

According to the 'Retraction Watch' database, an Indian scientist at an institute in Lucknow has racked up 45 retractions. It also states that another researcher at a university in Kolkata published 300 scientific papers in a year, which is nearly a paper a day and impossible. This individual had six papers retracted, which cover an array of disciplines including chemistry and virology. Paper retractions are becoming more common worldwide even as the research misconduct problem is worsening in India.

What are retractions?

A retraction is a mechanism that kicks in when a scientific paper published in an academic journal is found to be so flawed as to merit being removed from scientific literature. The academic community is often understanding when a paper is retracted for an honest error but much less



forgiving when a paper is pulled because it contains deliberately manipulated material. For example, the case of John Darsee, a young Harvard University cardiology researcher, stunned the academic community in the 1980s. He had over 80 papers retracted for spreading “inaccuracies and falsehoods”.

Scientific fraud is surprisingly endemic: the list with Darsee includes Jan Hendrik Schön, Brian Wansink, Hwang Woo-suk, and of recent Ranga Dias as well, among others. Even Nobel laureates are not spared. Gregg Semenza, a professor at Johns Hopkins University and winner of the 2019 medicine Nobel Prize, has had 12 papers retracted over potentially duplicated or manipulated images.

How often are papers retracted?

Between 2020 and 2022, 2.5 times more papers were retracted than they were between 2017 and 2019. The reasons for retraction include plagiarism, editorial conflicts, image manipulation, and the use of paper mills. During the COVID-19 pandemic, many publishers had fast-tracked the peer-review process for papers they received from scientists. As a result, some 10,000 papers had to be retracted in 2023 because of quality and/or data issues. The number was only around 1,600 in 2013. In 2023, a German neuropsychologist named Bernhard Sabel published the results of using a fake-paper detector he had built: he found that a third of 5,000 neuroscience papers published in 2020 likely had plagiarised and/or falsified content.

What is the retraction index?

A journal’s retraction index is the the number of retractions in a given time period multiplied by 1,000 and divided by the total number of published articles, according to a definition provided by scientists Ferric Fang and Arturo Casadevall in a September 2011 paper. They also showed that there’s a greater chance of a paper being retracted from a high-impact journal than from a low-impact one. ‘Impact’ refers to the impact factor: the average number of times a paper was cited in last two years.

Why do scientists falsify papers?

Paper mills are enterprises that churn out fake or low-quality journal papers and sell them to scientists. Thousands of papers published in academic journals worldwide have been linked to Russian, Iranian, and Chinese paper mills.

One reason they’re becoming more prevalent is because of research institutes’ desire to improve their national and international university rankings, where the primary criterion is research output. In today’s academic setting, one’s paper count can determine one’s chances of being promoted, securing grants and getting awards. PhD students are sometimes required to publish papers to graduate. This “publish or perish” culture encourages paper mills.

Misconduct makes scientists lose trust in one another and in literature. In a 2000 article in the journal *Nature*, H.N.J. Arst wrote, “All honest scientists are victims of scientists who commit misconduct.” Retractions are thus a way for science to correct its mistakes.

Reducing the prevalence of misconduct is an open problem in research policymaking. It needs to answer questions like: can journals detect bad papers with AI and what is a way to evaluate research quality over quantity?



Well-designed research misconduct policies can ensure unethical activities are kept in check and that the institute will follow due process. Additionally, policies governing research, particularly the production of research, can either create environments that incentivise or dissuade individual researchers from engaging in research misconduct.

While each of the individual policies is enacted for a specific purpose, collectively they can influence the prevalence of and the institute's ability to act against unethical research practices. Policies against misconduct and those that pressurise researchers to publish, can work against each other, yet strong policies to check misconduct must exist. For example, some have blamed the conflict between Italy's guidelines on research misconduct and its numerical thresholds for scholars to be promoted at universities for the rise in citation-doping (increasing the number of citations a paper has by unethical means) in the country.

"WEIRD" countries (short for Western, educated, industrialised, rich, democratic) have made much progress on policing research. One recent study of select European Union countries found four regulatory bodies per country on average dedicated to research integrity and ethics. While not without shortcomings, the non-obligatory requirements for research integrity and ethics training and lack of specific legal protections for whistleblowers are notable.

Progress elsewhere has been mixed, however. China and India have high research output but at the same time visibly high rates of retractions; have taken notice of the problem of research misconduct; and are making efforts to address it. Chinese authorities audited retractions this year, requiring universities to submit a list of papers that were retracted and for what reasons. In India, the University Grants Commission revoked the mandate for PhD scholars to have published papers in journals in order to graduate, reducing some of the pressure.

This said, reactionary audits and relaxing publishing requirements are not policies, nor do they constitute substantive reform. In fact, for all their willingness to audit, China's extant policies governing research production and the way bureaucrats are executing them could be fuelling research misconduct in academia.

Likewise, despite India's impressive strides in climbing up the research leaderboard, the country still lacks a comprehensive national policy on research misconduct as well as any sort of body dedicated to keeping an eye out for research misconduct. The recently established Anusandhan National Research Foundation is close to being a regulatory body, but India needs something more like the U.S. Office of Research Integrity.

When governance and responsibility over research are left largely to the discretion of institutes, policies can be dictated by shortsighted self-interest and with outcomes more detrimental than just research misconduct. In the end, every sufficiently large gathering or grouping of individuals required rules and supervision: society needs governments and laws, markets need watchdogs and regulations, and events need organisers and protocol. Similarly, scientists need bodies to implement ethical research and policies to encourage it.

EXPLAINED: THE 'DESI' COW, AND ECONOMICS OF MAHARASHTRA'S SUBSIDY SCHEME

Earlier this week, the Maharashtra government announced a subsidy of Rs 50 per animal per day for cattlesheds (gaushalas) that take care of indigenous (desi) breeds of cows.

The financial incentive will help preserve the state's desi cow population, the Cabinet note said. The government has also declared the state's indigenous cow breeds as "RajyaMata-Gomata".

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



Maharashtra's proposal

The subsidy scheme to preserve desi breeds of cows will be implemented by a Goseva Ayog, which will have scrutiny committees in all districts. Gaushalas that house indigenous breeds will have to apply online, and the subsidy will be released after the district-level committee submits a report.

The numbers of indigenous cows were on the decline, the government said. According to the 20th Livestock Census conducted in 2019, Maharashtra had 46,13,632 cows under the “indigenous/nondescript” category. This was 8.7% less than the population of 50,53,490 for these cows recorded in the previous Census (2012).

The official government resolution (GR) for the scheme is yet to be released. It is, therefore, not clear whether the subsidy will be for all cows under the indigenous/ nondescript category, or only for those animals that are certified as indigenous. It is financially not feasible to provide Rs 50/ day to 46 lakh cows.

Indigenous vs nondescript

Indigenous cows are those that belong to any of the breeds registered as such by the Karnal-based National Bureau of Animal Genetic Resources, a body under the Indian Council of Agricultural Research (ICAR) that aims to “protect and conserve indigenous farm animal genetic resources for sustainable utilisation and livelihood security”.

Nondescript cows, on the other hand, have no recognised breed characteristics.

Cows in Maharashtra

The Maharashtra Animal Husbandry Commissionerate defines indigenous cows as including both descript and nondescript animals, with the latter having at least 50% indigenous-breed blood. A large proportion of the state's cattle population comprises nondescript animals with less than 50% blood of any recognised indigenous breed.

There are 19 breeds of indigenous cows in Maharashtra. Khillari accounts for half the indigenous cow population in the state. The breed is favoured by farmers for its sturdiness and potential for use as a draught animal. Most of the state's Khillari cattle population is found in Pune division, where bullock cart races are held regularly.

Other indigenous breeds in Maharashtra include Deoni, Red Kandhari, Sahiwal, and Tharparkar.

Desi milch animals

There are 37 indigenous cattle breeds in India, of which only four are good milch animals, Dr Nayaran Hegde, former president of the Pune-based nonprofit BAIF Development Research Foundation, said. The vast majority of indigenous breeds are primarily used for agriculture and transport.

Indigenous breeds produce only 3.44 kg of milk per day on average, compared to 8.55 kg per day for exotic/ crossbred animals, according to the central government's Basic Animal Husbandry Statistics (BAHS) 2023.

While Indian breeds are hardier and believed to be better suited to Indian conditions, for farmers, milk production is key.



Arguments for desi

The conservation of indigenous breeds has long been on the agenda of the BJP both at the Centre and in the state. The National Gokul Mission which was launched in December 2014 had a component of the preservation and promotion of indigenous breeds of bovine animals. The decision of the Eknath Shinde government has come as the state heads to Assembly elections.

Advocates for desi breeds claim they produce 'A2' milk, which is supposed to be healthier than the 'A1' milk produced by animals that have been crossed with exotic breeds like Holstein Friesian, Jersey, and Brown Swiss. A1 and A2 contain genetic variants of proteins, which differ in their amino acid sequence.

There is no scientific consensus on whether A2 milk is really healthier. Dr Hegde said the claims about A2 are not supported by research or ground observations. In August, the food safety regulator Food Safety and Standard Authority of India (FSSAI) advised Food Business Operators (FBOs) to not market their milk and milk products "in the name of A1 and A2", but withdrew the advisory days later.

Subsidy and prices

The scheme has been announced for animals reared in gaushalas, and not by farmers. Most farmers are more keen on remunerative prices for their milk. While the state government has announced a Rs 5/ litre subsidy to farmers battling low realisations, the release of the subsidy is conditional upon farmers receiving a base price of Rs 30/ litre from dairies. And most dairies are not paying more than Rs 27-28 per litre of milk.

E-OFFICE SYSTEM SHUTDOWN DERAILS ADMINISTRATIVE WORK IN RAILWAYS

For about a week, routine administrative work was affected across Indian Railways after National Informatics Centre's (NIC's) e-Office, a product of RailTel, crashed.

According to official sources, the entire file movement and related communications in the Railways came to a grinding halt after the e-Office system failed.

Emergency and urgent files were handled manually during this period. Railways is one of the many departments that had fully migrated to the platform.

RailTel restored normalcy on Friday, the sources said.

NIC e-Office, a workflow-based system that replaced the existing manual handling of files with a more efficient electronic system, is in operation in more than 236 establishments of the Indian Railways across the country and has onboarded 1.47 lakh users.

Besides the Railways, the application is also hosting services for many government organisations, including Employees Provident Fund Organisation (EPFO), Indian Railway Catering and Tourism Development Corporation (IRCTC), Rail Vikas Nigam Limited (RVNL), and so on.



SMALL NUCLEAR REACTORS GET TRACTION: PRIVATE PLAYERS OFFER CAPTIVE SITES FOR POWER PROJECTS

India's plans to get into the manufacturing value chain of Small Modular Reactors are yielding some positives with a handful of private players learnt to have shown interest in deploying these at their captive site.

— SMRs — with a capacity of 30MWe to 300 MWe per unit — are increasingly seen as important for nuclear energy to remain a commercially competitive option in the future. India is pushing for a leadership slot in this small reactor space, both as a way of fulfilling its commitment to clean energy transition, and bundling SMRs as a technology-led foreign policy pitch.

— With SMRs seen as playing a key role in countries achieving their energy transition goals, Russia is also learnt to be keen to expand its nuclear cooperation with India to include a partnership in SMRs, sources said.

— An SMR would typically account for about a third of the generating capacity of most traditional nuclear power reactors being deployed by countries such as France, Russia or the United States.

— These reactors are important in offering base load power that could give grid operators some degree of operational flexibility. This is seen as significant since SMRs, when pooled together, can produce a meaningfully large amount of electricity and help meet the challenge of inducting more base load power to balance out the vagaries of renewable power output. While thermal generation is seen as important in this regard, nuclear energy offers a more carbon-neutral base load generation option.

— Though India's civil nuclear programme has progressively upscaled its reactor sizes, from the earlier 220MWe reactors to the latest 700MWe PHWRs (pressurised heavy water reactors), the country does have an edge in producing and commercially operating small reactors.

— What changes now is that this push for SMRs which has been on the policy agenda for well over a decade is now likely to turn mainstream and, more importantly, could have the backing of countries such as the United States, especially on the financing aspect and dissemination of the technology.

— In the civil nuclear sector, New Delhi is pushing SMRs as a technology of promise that can help in industrial decarbonisation, and is hard selling its ability to take some kind of a leadership role in the dissemination of this technology.

For Your Information:

— SMRs are small reactors offering 30-300 MWe power output per unit, and are seen as effective in not just producing base load power (where thermal is seen as important), but also amongst renewables as a more carbon-neutral source.

— SMRs are conceptualised in such a way that their systems and components are manufactured in a controlled factory environment and then transported straight to the project site to be installed, which optimises the construction lead time and cuts down the cost of these projects — two big concerns with regard to traditional large reactor projects.



— They have potential deployment advantages like reduced size of the Emergency Planning Zone (ring fenced areas around the project site) and passive safety system, rendering them relatively safer than larger reactor-based projects.

WHAT IS THE STATUS OF THE SWACHH BHARAT MISSION 2.0?

The story so far:

India has more than 3,000 legacy waste dumpsites, with 2,424 of them having a waste load of more than 1,000 tonnes. The Central government launched the legacy waste management project as part of the Swachh Bharat Mission (SBM) 2.0 in October 2021, for a period of five years till 2026. However, more than halfway through the time period, only 471 out of the 2,424, that is 19.43% of dumpsites have been completely remediated.

What are legacy waste dumpsites?

Legacy waste dumpsites are dumpsites that contain solid waste that have been collected and stored for years in an unscientific and uncontrolled manner. Municipal solid waste generation in India is estimated to be around 1,50,000 tonnes per day, according to the State of India's Environment 2023 report. With almost no installed facility in India for handling solid waste, the municipal corporations, municipal councils and *nagar* (city) panchayats have traditionally opted for creating man-made garbage hills.

These dumpsites originally developed on the outskirts of the cities. However, with the expansion of cities, these sites are now often found in the heart of cities on barren land or in landfills. According to estimates of the Union Housing and Urban Affairs Ministry, approximately 15,000 acres of prime real estate is buried under nearly 16 crore tonnes of legacy waste across the country.

What are the health hazards?

Legacy waste dumpsites can pose a number of health hazards for citizens. Exposure to emissions from hazardous waste can irritate the mouth and throat. Inhaling methane from landfills can cause nausea, vomiting, and loss of coordination. Raggpickers who work at landfills can develop skin allergies from years of exposure to waste. People who live near landfills may be prone to developing tuberculosis, asthma, diabetes, depression, cholera, malaria, and other diseases. They are also a source of greenhouse gas emissions, such as methane and carbon dioxide.

What is the Swachh Bharat Mission?

The Swachh Bharat Mission (SBM) or Clean India Mission is a country-wide campaign launched by the Central government on October 2, 2014 to eliminate open defecation and to create Open Defecation Free (ODF) villages. The mission aimed to achieve an “open-defecation free” India by October 2, 2019 coinciding with the 150th birth anniversary of Mahatma Gandhi through the construction of toilets.

In 2021, the Government launched its second edition — the five-year Swachh Bharat (Clean India) Mission-Urban 2.0 (SBM-U 2.0), committing to making all cities “garbage-free cities” by 2026, while maintaining ODF status across 4,372 Urban Local Bodies (ULBs). It also has a vision of 100% source segregation, door to door collection and scientific management of all fractions of waste, including safe disposal in scientific landfills. The SBM 2.0 aims to remediate all legacy dumpsites



and convert them into green zones. The mission has also made provisions for scientific landfills to dispose of untreated inert waste and process rejects, in order to prevent fresh dumpsites being created.

Action plans amounting to ₹3,226 crore of Central Share (CS) assistance on remediation of legacy waste dumpsites has been approved so far. An advisory has also been issued to the States/Union Territory administrations on landfill reclamation. As per financial norms of centrally sponsored schemes, State/ UT governments are required to put in a matching share from their own side, while disbursing the funds to respective ULBs.

What has been the progress so far?

According to the dashboard of the Swachh Bharat Mission website, as on September 24, out of the 2,424 dumpsites, 471 sites have been remediated, remediation in 1,226 has been approved and is on-going, and 727 sites have been untouched. As far as area is concerned, of the total 17,039.71 acres, 27 % has been reclaimed and 73% is yet to be reclaimed.

Among States, Tamil Nadu has the maximum area reclaimed from dumpsites at 837 acres (42%). Gujarat is the best performing State with 75% area (698 out of 938 acres) of landfills reclaimed.

For Your Information:

— The launch of the Swachh Bharat Mission (SBM) by the Prime Minister on October 2, 2014, had a unique goal — to achieve universal sanitation coverage and to make the country Open Defecation Free (ODF). By offering financial incentives for building household toilets, as well as community toilets for slums and migrant populations, the government gave a huge fillip to the toilet infrastructure.

— The second phase of the project, which commenced in 2020 and is expected to run till 2025, has set even more ambitious targets — sustaining the achievements of phase 1 and ensuring that treatment of both liquid and solid waste is achieved through the help of technology and private sector engagement.

PM MODI TO LAUNCH SANITATION PROJECTS WORTH OVER ₹ 9,600 CRORE ON OCTOBER 2

Prime Minister Narendra Modi will mark the completion of 10 years of the Swachh Bharat Mission launch by participating in the Swachh Bharat Diwas programme on October 2, during which he will launch and lay foundation stones for several projects related to sanitation and cleanliness worth more than ₹9,600 crore.

— The Swachh Bharat Diwas programme will showcase India's decade-long sanitation achievements and those in the recently- concluded "Swachhata Hi Seva" campaign.

— The projects to be launched include those worth more than Rs 6,800 crore aimed at enhancing urban water and sewage systems under AMRUT

- The Swachh Bharat Diwas programme will also set the stage for the next phase of this national endeavour, the statement said.



— The theme for “Swachhata Hi Seva 2024” — “Swabhav Swachhata, Sanskaar Swachhata” — has once again united the country in its commitment to cleanliness, public health, and environmental sustainability, the statement said.

AFTER LUKEWARM RESPONSE, PM MEMENTOS E-AUCTION EXTENDED BY A MONTH

A pair of spike shoes presented to Prime Minister Narendra Modi by Paralympic silver medallist Ajit Singh, badminton rackets by Paralympic shuttlers Nithya Sre Sivan and Sukant Kadam, and silver medallist Yogesh Khatuniya’s discuss — all with a minimum bidding price of Rs 5 lakh upwards — have not registered any bids so far as part of the ongoing auction of the PM’s mementos.

These remain among the 79 objects that have not received any bids in the 15 days that the auction has been going on. Featuring over 600 objects ranging from paintings, sculptures and indigenous handicrafts to traditional angavastram and headgear, this year’s edition of the auction started on September 17 and was to conclude on October 2.

However, with several objects still to find takers, the date has now been extended by almost a month, with the auction closing on October 31. “Originally scheduled from 17th September to 2nd October, 2024, the auction will now be open for participation until 31st October 2024,” said a statement released by the Ministry of Culture on Wednesday, which organises the auction every year.

While the memorabilia donated by Paralympic champions are the star items of this year’s edition with the highest base price, other key items include a replica of the Ram temple and even a silver veena – all gifts received by PM Modi during his visits across the country over the last year.

The cumulative base price of all the items together comes to around Rs 1.5 crore, Culture Minister Gajendra Singh Shekhawat told reporters ahead of the auction while conducting a walk-through of the exhibition showcasing some of the objects at the National Gallery of Modern Art. He said the base prices for these gifts are set by a government committee, with prices ranging from as low as Rs 600 to as high as Rs 8.26 lakh.

The current e-auction marks the sixth edition in a series of auctions, initially launched in January 2019. As with previous editions, the proceeds from this edition of the auction will also be contributed to the Namami Gange Project, the Centre’s flagship initiative dedicated to the conservation and restoration of the Ganga and its fragile ecosystem.

The highest-priced mementos are encased sports shoes of Paralympic bronze medallists Ajeet Singh and Simran Sharma and silver medallist Nishad Kumar as well as a signed cap of silver medallist Sharad Kumar – priced around Rs 8.26 lakh. Sivan and Kadam’s badminton rackets and Khatuniya’s discus have been priced at Rs 5.50 lakh.

A model of Ram Temple priced at Rs 5.50 lakh, a peacock statue valued at Rs 3.30 lakh, a statue of Ram Darbar priced at Rs 2.76 lakh and silver veena priced at Rs 1.65 lakh are among the other high-end mementos. The lowest-priced mementos include cotton angavastram, caps, and shawls, priced at Rs 600 each, which have registered the most bids this time.



A MISSION'S NEXT STEP

What's common to the following accomplishments — a drone swarm lighting the skies in coordinated splendour at the Beating Retreat ceremony at Rashtrapati Bhavan... All of them are successful outcomes from the Government of India's Department of Science and Technology's ambitious National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).

— Launched by Prime Minister Narendra Modi in December 2018 with a budget outlay of Rs 3,660 crore, it aims to establish India as a global leader in Cyber-Physical Systems (CPS) — merging the physical world with computational systems, driving breakthroughs in areas like AI/ML, robotics, cybersecurity, and autonomous navigation.

— The Mission has adopted several innovative mechanisms such as the establishment of Technology Innovation Hubs as separate Section 8 companies to translate existing research into high technology readiness level (TRL), market-ready products pertaining to national priorities.

— The IT-OT Security Operations Center (SOC) from C3iHub at IIT Kanpur offers 24/7 cyber threat protection, integrating advanced technologies like intrusion detection, malware analysis, and real-time risk assessment.

— Designed for both IT and OT assets across sectors such as power and water treatment and implemented at the National Highways Authority of India, it is 3x-5x more cost-effective than larger competitors.

— TiHAN Foundation at IIT Hyderabad focuses on autonomous navigation for both aerial and terrestrial systems, offering a state-of-the-art testbed with advanced features like test tracks, rainfall simulators, and V2X communications.

— AWaDH at IIT Ropar is advancing cyber-physical systems to promote sustainable agriculture and water management.

— Another startup making a difference in the defence sector is COMRADO Aerospace from ARTPARK at IISc, which develops high-performance, cost-effective solutions for commercial and military applications...

— The innovation hubs are expected to move towards self-funding through commercialisation as part of their financial autonomy journey. Indian industry has a significant role to play here. They should fund and co-create their next innovations from these hubs.

— NM-ICPS' success will play a pivotal role in positioning India as a global leader in CPS technologies, with far-reaching implications for the country's economic growth, self-reliance, and societal well-being.

For Your Information:

— Prime Minister Narendra Modi on September 26 inaugurated three PARAM Rudra supercomputers worth Rs 130 crore.

— Developed indigenously under the National Supercomputing Mission (NSM), the three new supercomputers are located in Pune, Delhi, and Kolkata, and make up a High-Performance Computing (HPC) system tailored for weather and climate research.



SURVIVING IN INDIA'S SALT DESERT

The Rann of Kutch evolved when waters of the Arabian Sea made incursions into this region 150-200 million years ago. Geological upheavals led to the rise of a landmass that cut off the Kutch basin from the sea. The Little Rann of Kutch lies at the end of the Gulf of Kutch and covers an area of 5,000sq. km, chiefly in the Surendranagar district of Gujarat.

For most of the year, this landscape consists of vast, barren and white salt flats. A striking alteration occurs when the monsoon sets in, and the Rann turns into a shallow wetland. About 75 elevated pieces of land turn into islands, called bets by the local Agariya and Maldhari communities.

The Little Rann of Kutch is home to the wild ass sanctuary, which is the only remaining habitat of the Indian wild ass (*Equus hemionus khur*), locally called khur. About 6,000 of these sandy and brown creatures live in this area. The terrain they occupy is harsh through most of the year, and the vegetation is dry and xerophytic. Khur, like donkeys and other members of the *Asinus* subgenus, possesses a remarkable ability to locate sustenance in desolate environments. Their digestive systems are adept at processing even the most arid vegetation. The khur has outlasted predators such as the cheetah and the lion, which were last spotted in this region in the 1850s.

The khur is almost the size of a zebra and lives for 21 years. Stable groups of khur consist of females and their young. Stallions tend to be loners, especially in the breeding season. On the flat terrain of the Rann, they are capable of bursts of up to 70 km per hour. Life can be tough for the mares, as gestation periods are long, 11 to 12 months, and concurrent lactation and pregnancy are sometimes seen.

Back from the brink

The Khur have recently overcome a near-extinction event on account of diseases. The viral African Horse sickness and Surra (caused by the protozoan parasite *Trypanosoma evansi* and spread by biting insects) had decimated many herds, and only a few hundred survivors were estimated in the 1960s.

Analysis of the mitochondrial DNA of the khur by scientists at the Government Vidarbha Institute of Science in Amravati has indicated a low level of genetic diversity. This is because of a genetic bottleneck caused by disease outbreaks, which left only a small number of survivors. Thanks to persistent conservation efforts, the population of the khur has shown an upward trend in recent decades.

Conflicts with humans

The salt marsh attracts human enterprise—30% of India's salt comes from the Little Rann.

Every year, a seasonal migration transforms this mirage-like landscape, bringing in 5,000 families and a surge of heavy vehicular traffic. This influx, coupled with extensive cattle grazing, poses a major threat to the delicate ecosystem and its wildlife. Irrigation canals that bring water to the southern rim of the Little Rann can also add salinity to the soil.

Increased human presence, both for salt farming and agriculture, has led to a dispersal of the khur. Herds are seen in adjoining areas of Gujarat and even Rajasthan. In the process, the wild ass has acquired the reputation of a crop raider. Other animals such as the nilgai and feral pigs cause more



damage to crops, but the khur gets disproportionately blamed. A proper separation of the sanctuary's starkly beautiful landscape from human-dominated areas would be better for both.

ON GENDER PERFORMATIVITY: HOW IT CHALLENGES THE GENDER BINARY

A concept that has significantly influenced gender theory, gender performativity enables a more fluid understanding of gender by challenging fixed notions of identity. Poststructuralist scholar Judith Butler introduced this idea in her 1990 work, *Gender Trouble*. Butler critiques the essentialist view, which associates sex to the binary of the masculine and the feminine. Instead, Butler argues that gender is a socially constructed identity — produced, reproduced, and maintained through repeated actions, behaviours, and discourse. Therefore, it can never truly be a fully stable identity; even if it appears persistent.

Butler explains that social norms surrounding gender are so embedded in our lives that they seem natural and appropriate, confining individuals to rigid gender roles. However, these norms are not fixed and the roles can be subverted because they depend on constant repetition for their seeming stability. Acts of resistance within social structures can lead to transformation and a new understanding of gender. Butler's work on gender not only challenges traditional theories but also marks a milestone in third-wave feminism, making a significant contribution to queer theory.

Two theories of gender

While there are many debates surrounding the definition of gender, two of the most significant theories are gender essentialism and social constructivism. Gender essentialism, in simple terms, posits that gender is best explained through biology — sex chromosomes and DNA determine one's sex, which in turn defines their gender. According to this perspective, the traits, roles, and behaviours associated with masculinity and femininity come naturally, as they are predetermined by biological factors.

On the other hand, social constructivism explains that gender identity is constructed through discourse, which includes not only language but also bodily, verbal, and non-verbal acts. Gender norms become internalised to the point that they feel natural to those who align with their assigned gender. For example, a child with a uterus is assigned the gender of a girl at birth, given the pronouns she/her, and exposed to traditionally feminine roles. Deviations from these norms are often met with bullying and disciplinary actions.

For example, in many schools in India, while girls are expected to have long neatly tied hair, if a boy grows his hair long, he may face criticism and be pressured to conform to traditional masculine norms and cut his hair short. This demonstrates how regulations and expectations shift according to gender, even in contexts where uniform standards should apply.

Iris Marion Young's 1980 essay, "Throwing Like a Girl: A Phenomenology of Feminine Body Comportment, Motility, and Spatiality," examines how gender norms can also influence movement. Young shows that girls are expected to act in ways perceived as weaker and more restrained, such as using less physical space and energy when throwing a ball, compared to boys. Interestingly, these behaviours and roles are not constant and may shift over time and across cultures; for instance, in the 19th century, pink was considered masculine, while blue was associated with women.



This also reflects Simone de Beauvoir's assertion in the 1949 book, *The Second Sex*: "One is not born, but rather becomes, a woman." De Beauvoir's statement underscores that gender identity is shaped and constructed through societal norms, and is not an innate quality.

Sex and gender

Judith Butler extends this discussion, and critiques second-wave feminism's distinction between sex and gender. Scholars like Gayle Rubin argue that sex is determined by biological factors while gender is shaped by social norms. However, Butler challenges this separation, contending that even "sex" is subject to social interpretation. According to Butler, we cannot experience biological sex apart from the social meanings attached to it. Thus, both sex and gender should be viewed as socially constructed, as gender ultimately subsumes sex. The idea that a person's body predetermines their gender identity is a product of social discourse, not a biological fact.

Butler explains that gender is not something we are, but something we do. Instead of viewing gender as a noun, Butler conceptualises it as a verb — something one performs rather than possesses. One is not a woman but does 'womanness'. Gender thus, is defined as the stylised repetition of acts through time. This can be compared to the act of speaking. Just as talking involves the continuous repetition of words within the structure of language, gender involves an ongoing enactment of set roles. Speaking requires not just uttering individual words but engaging in a consistent and rule-governed process over time. Similarly, gender performativity involves the repetition of acts and behaviours aligned with societal expectations.

Performativity and performance

While expanding on the notion of performativity, it is important to distinguish it from the concept of performance. Performance suggests that individuals take on a gender role and actively embody societal expectations of what it means to be masculine or feminine, as if role-playing is central to the gender we express. However, performativity of gender is not a conscious act that one can alter at will. Rather, it refers to the ongoing process through which individuals unconsciously perform and reinforce societal norms of masculinity and femininity. These norms are deeply ingrained, creating the illusion that they are natural, even though they are socially constructed.

For example, we give baby dolls to young girls to play with, which plays into feminine stereotypes of being nurturing as eventually a woman, as per societal norms, has to become a mother. Although these actions of caregiving seem instinctive, they are learned through imitation and reinforced by societal expectations. Performativity, in this sense, means that these repeated actions produce a series of effects — talking and acting in ways that reinforce the impression of being a man or a woman.

Gender expression then, according to Butler, does not originate from within the individual but is shaped by external social norms. People don't instinctively know how to be masculine or feminine; instead, it is through the repetitive enactment of societal expectations and norms that individuals come to express these gender characteristics.

Critiques of gender performativity

Despite the groundbreaking impact of Butler's work, the theory has faced criticisms, particularly from transgender theorists like Julia Serano.

As a transgender and bisexual activist and author of *Whipping Girl: A Transsexual Woman on Sexism and the Scapegoating of Femininity*, Serano argues that gender essentialism fails to explain



the numerous individuals whose gender expression defies societal expectations. There are far too many of them to be dismissed as genetic anomalies. Yet, Butler's theory and social constructivism also fail to account for transgender individuals, whose gender expression is not merely a response to societal norms but often aligns with what feels right for the individual. This suggests that gender identity can emerge from within, especially as these expressions frequently manifest at a young age, before the full impact of social conditioning takes effect.

To address these gaps, Serano introduces the concept of "subconscious sex" where individual minds are intrinsically inclined toward a certain gender identity, independent of societal conditioning. While cisgender individuals experience alignment between their physical bodies and gender identities, transgender individuals face a mismatch, leading to gender dissonance.

But while emphasising the role of the brain in gender identity, Serano agrees with Judith Butler and Simone de Beauvoir that social norms can influence or interpret one's subconscious sex. Thus, gender becomes both subject and object—shaped by internal inclinations as well as societal influence.

2 WOMEN NAVY OFFICERS BEGIN VOYAGE AROUND THE WORLD

Lieutenant Commander Dilna K. and Lieutenant Commander Roopa A. of the Indian Navy on Wednesday embarked from Goa on a challenging expedition to circumnavigate the globe, covering 23,000 nautical miles over 240 days.

The second edition of the Navika Sagar Parikrama was flagged off from Ocean Sailing Node, *INS Mandovi*, by Navy chief Admiral Dinesh K. Tripathi. The two women officer set sail on the *INSV Tarini*.

The voyage will take the two women officers across four continents through three oceans and three challenging capes.

"I am pleased to note that Navika Sagar Parikrama will contribute towards progressing national scientific research in collaboration with the National Institute of Oceanography for study on marine microplastics and ferrous content across the seas; Wildlife Institute of India for exploration on Mega Faunas or large sea mammals; Sagar Defence for their drones that promise us spectacular visuals of the voyage; and Defence Food Research Laboratory towards providing customised precooked Indian meals so that our valiant warriors always feel at home," Admiral Tripathi told the gathering. He also released a special chart commemorating the expedition on the occasion.

It will unfold in five legs with stopovers at four ports for replenishment and maintenance. The five legs are Goa to Fremantle, Australia; Fremantle to Lyttleton; New Zealand to Port Stanley, Falkland; Port Stanley to Cape Town, South Africa; and from Cape Town to Goa.

INSV Tarini, a 56-foot sailing vessel built by Aquarius Shipyard Ltd., was inducted in the Indian Navy on February 18, 2017. The vessel has clocked more than 66,000 nautical miles (1,22,223 km) and participated in the first edition of Navika Sagar Parikrama in 2017, trans-oceanic expedition from Goa to Rio, Goa to Port Louis, and other significant expeditions.

The boat is equipped with advanced navigation, safety and communication equipment and has undergone necessary maintenance and equipment upgrade recently, the Navy said in a statement.



Both officers with a sailing experience of 38,000 nautical miles (70,376km) have trained vigorously for this epic voyage for more than three years. They have been trained on ocean sailing aspects of seamanship, meteorology, navigation, survival techniques and medicare at sea.

ECHOES OF A FORGOTTEN MARITIME LEGACY

As the monsoon batters the coastline, the sands of Visakhapatnam's beaches have once again shifted, revealing a piece of the city's forgotten history. Pillboxes used during the Second World War, long buried under layers of sand, have resurfaced, offering a tangible glimpse into a less-known chapter of the city's maritime legacy.

"These pillboxes, built during the height of the Second World War, were part of a strategic defence network to protect Visakhapatnam's shores from potential enemy invasions. These are equipped with loopholes through which defenders can fire weapons," says Edward Paul, a member of Indian National Trust for Art and Cultural Heritage, Visakhapatnam chapter, who has documented the history of the city.

The most prominently visible one is at the R.K. Beach which was uncovered during beach erosion. The second one is at the Jalaripeta fishing colony within the city limits; but it lies buried under a heap of sand, garbage and apathy.

"The designs of the pillboxes were often compared to medicine containers made in the early 20th century to store pills; that is how the term 'pillbox' became popular," added Mr. Paul.

As one of India's most important naval bases with a deep natural harbour, the port city was seen as a key target during the war. Constructed by the British and positioned along the coastline, these fortifications were meant to guard the city's vital port against any threats from Axis forces, especially from Japanese submarines and aircraft.

The erosion caused by the annual monsoon has made these pillboxes visible to beach-goers, many of whom are unaware of their historical significance.

Even as environmental experts express their concern over the growing beach erosion in Visakhapatnam due to changing weather patterns, it has unintentionally brought these wartime relics back into the public eye.

While the sea may reclaim the sand and hide these pillboxes again, their legacy and the stories remain an enduring chapter in the city's maritime history.

ABOUT 30,000 INDIANS YET TO RETURN FROM SOUTHEAST ASIA, PUNJAB TOPS LIST

29,466 of the 73,138 Indians who travelled to Cambodia, Thailand, Myanmar and Vietnam on visitor visas from January 2022 to May 2024 are yet to return. These new details have emerged in data compiled by the Bureau of Immigration, under the Ministry of Home Affairs (MHA), amid reports of some Indians being trapped in "cyber slavery" in some Southeast Asian countries.

— "Among the 29,466 unreturned passengers, 21,182 are males. Of the total, 20,450 did not return from Thailand, 6,242 from Vietnam, 2,271 from Cambodia, and 503 from Myanmar," said a source in the security establishment.



— On March 28, The Indian Express had reported that over 5,000 Indians were suspected to be trapped in Cambodia, allegedly held against their will and forced to carry out cyber frauds. According to government estimates, Indians had been duped of at least Rs 500 crore in the six months prior to March this year.

— The Centre had then set up the inter-ministerial panel to look into the issue and identify the loopholes. The panel is learnt to have identified gaps in banking, immigration and telecom sectors.

— As reported by *The Indian Express* earlier, the victims are sent on the pretext of data entry jobs, and then forced to carry out cyber frauds.

— Analysis of data by the Indian Cyber Crime Coordination Centre (I4C), a division of the MHA, had found an increase in the number of cyber crimes targeting Indians — about 45 per cent were found to originate from the Southeast Asia region. Around 1 lakh cyber complaints have been registered with the National Cyber Crime Reporting Portal since January 2023.

For Your Information:

— The I4C works under the Union Home Ministry “to create an effective framework and ecosystem for the prevention, detection, investigation, and prosecution of cybercrime in the country”.

— The I4C has identified four broad categories of fraud originating from Myanmar, Laos, and Cambodia, following certain modus operandi. It includes trading scams, digital arrests, investment scam, and romance/ dating scams.

GOVT TO CUT OFF 2 CRORE MOBILE CONNECTIONS BLOCK 2 LAKH HANDSETS

The Union Ministry of Telecommunications has informed the Centre’s high-level inter-ministerial panel it will disconnect around 2.17 crore mobile connections, that are either taken on forged documents or misused in cybercrime, and also block 2.26 lakh mobile handsets.

— According to government estimates, Indians had been duped of at least Rs 500 crore in the six months before March this year. The Centre had then set up the inter-ministerial panel to look into the issue and identify the loopholes. The panel is learnt to have identified gaps in the banking, immigration, and telecom sectors.

— DoT said it has taken several measures to effectively implement Know Your Customer (KYC) for the procurement of SIM cards. “They are also disconnecting around 2.17 crore mobile connections, that are either taken on fake/forged documents, more than prescribed limit or misused in cyber-crime/financial frauds. They are also blocking 2.26 lakh mobile handsets,” said a source in the security establishment.

— DoT said in the meeting that to identify roaming phone numbers in scam compounds in the Southeast Asia region, all the telecom service providers (TSPs) have been asked to provide data every week for Indian mobile numbers, which are under roaming facility in Hong Kong, Cambodia, Laos, Philippines, and Myanmar.



THE OTHER MONSOON

India's southwest monsoon has ended on an optimistic note, with 8% more rain than anticipated. Reassuringly, the rainfall forecast by the India Meteorological Department (IMD), particularly since July, was accurate. Monsoon clouds continue to prevail over the country but given the centrality of rainfall to the Indian economy, focus has already shifted to the 'other monsoon', the northeast monsoon. It is named so because of the direction in which the winds exit from the land mass into the sea. Following the withdrawal of the southwest monsoon in mid-October, the northeast monsoon is characterised by a reversal of winds that brings rain to parts of coastal Andhra Pradesh, Tamil Nadu, Kerala, and parts of southern Karnataka. For Tamil Nadu, the northeast monsoon is the main source of rainfall. The northeast monsoon brings in only about 11% of India's annual rainfall.

The IMD has forecast that this year's post-monsoon rainfall is likely to be 'above normal' or about 12% over the historical average. Because of its limited spread and quantity, the northeast monsoon does not get as much attention as the southwest monsoon. However, it significantly affects the productivity of rice and maize in Tamil Nadu and Andhra Pradesh. Records show that in years of deficiency, there was a considerable decrease in agricultural production in the region. The northeast monsoon rainfall, averaged over the five subdivisions where it is predominant, has a variation of almost 25%, exceeding that of the southwest monsoon rainfall (10%). This translates into years of massive deluge followed by dry spells. In 2015, Chennai experienced a deluge during the northeast monsoon, resulting in significant loss of life and property. In 2019, the city faced severe water shortage. If this year's forecast holds, it will be the second consecutive year of a normal northeast monsoon. Expectations are high that a La Nina, or cooling of the equatorial central Pacific, will support this. However, most global models have struggled to forecast the timing of La Nina this year. Thanks to improved forecast systems, the northeast monsoon is less neglected than before. Nevertheless, more focus is needed on modelling its impact regarding urban flooding. Climate change uncertainty makes such prognosis essential, and disaster management agencies in States must develop credible strategies to incorporate these buffers into budgets.

BIHAR UNDER WATER: WHY THE STATE SEES FLOODS EVERY YEAR

Bihar is flooded yet again, with 11.84 lakh people hit — driven out of their homes, surviving on air-dropped food packets, huddling in shelters, vulnerable to water-borne diseases. North Bihar sees floods every year. Lakhs of people see their crops and livestock destroyed. They pick up the pieces and start again, only for the story to be repeated the next year.

— According to the state government's Flood Management Improvement Support Centre (FMISC), "Bihar is India's most flood-prone state, with 76 per cent of the population in north Bihar living under the recurring threat of flood devastation."

— Bihar is crisscrossed by both snow-fed and rain-fed rivers, putting it at the risk of various kinds of floods.

— The state's Disaster Management Authority has categorised floods into four classes. The first are flash floods, and then are river floods. The authority's website further says, "Class III: Drainage congestion in river confluence- lead time more than 24 hours, lasting full monsoon season (i.e. receding of flood water takes 3 months); Class IV: Permanent water logged area."



— A major reason for the first three kinds of flooding is that Bihar is located below Nepal, with its Himalayan rivers flowing down to the state. Because the Himalayas are a young mountain range with a lot of loose soil, these rivers — Kosi, Gandak, Burhi Gandak, Bagmati, Kamla Balan, Mahananda, Adhwara — are full of sediments. Thus, when the volume of water increases due to rains, the rivers quickly overflow their banks.

— This year, the flood has been caused by heavy rainfall and flooding in Nepal and release of water from its barrage on the Kosi River.

— Given that Bihar's geography makes floods inescapable, solutions have been sought for decades. Among the more destructive rivers of the state is Kosi, known as the 'sorrow of Bihar'.

— Soon after independence, in the 1950s, embankments were built along the Kosi to contain its flow. While they were seen as a lasting solution, not only have the embankments been breached several times, they have created a new problem.

— This time, flooding is worse than the past few years because the Birpur barrage, built on the Kosi in Nepal, released 6.6 lakh cusec of water, the highest in almost six decades. While Bihar floods may not result in loss of lives every year, their economic cost is steep... The state government spends about Rs 1,000 crore annually for flood management and relief.

— "There are two ways of dealing with floods — one is through structural solutions, which includes dams, embankments, etc., and the other is through non-structural solutions, which includes laws, policy, risk reduction, mitigation, etc."

— "In Bihar, because its geography can't be changed, there is a great need to work on aspects like adequate warnings, quick reaction times, awareness and training in dealing with floods, etc."

For Your Information:

— Last year, the Patna High Court has directed the Centre and Bihar government to set up Kosi Development Authority and interlink Kosi and Mechi rivers to tackle annual floods often caused due to excess water discharged from Nepal.

PREPARING FOR THE NEXT PANDEMIC: WHAT NITI AAYOG REPORT SAYS

Four years after the outbreak of Covid, an expert group constituted by NITI Aayog has recommended setting up a comprehensive framework to effectively manage future public health emergencies or pandemics.

— The Pandemic Preparedness and Emergency Response (PPER) framework has called for a new Public Health Emergency Management Act (PHEMA), and the implementation of other measures to ensure a swift and effective response within the first 100 days of the outbreak.

— Here are some of the key recommendations made by the expert group in its report:

- a) Public health emergencies require governments to exercise special powers such as mandatory screening of people and putting restrictions on free movement... The new law can empower central and state governments to effectively respond to not just pandemics, but also other kinds of health emergencies arising from non-communicable diseases, disasters or bioterrorism.



- b) The report proposed creating an Empowered Group of Secretaries (EGoS) — a committee of officials which will be headed by Cabinet Secretary to prepare for public health emergencies and monitor preparedness during peace times.
- c) The report proposed the creation of a national biosecurity and biosafety network... to protect people and the environment from biological hazards), and genome sequencing centres.
- d) The report proposed building an epidemiology forecasting and modelling network that can predict transmission dynamics of infectious diseases...
- e) India needs a well-developed clinical trial network accepted by international regulatory authorities to ensure speedy access to innovative products to tackle public health emergencies.

For Your Information:

— An expert group constituted by NITI Aayog has recommended a new Public Health Emergency Management Act (PHEMA) to deal with the public health crisis, which would create health cadres at national and state levels and also empower public health agencies to take urgent action.

— The group, headed by Dr Renu Swarup, former secretary at the Department of Biotechnology, was formed in June 2023.

— In September, its 'Future Pandemic Preparedness and Emergency Response: A Framework for Action' report was made public.

CADAVER DONATIONS: NEED, RULES AND CHALLENGES

— Generally, cadavers are used to train doctors by helping them better understand human anatomy and practice surgery. Although dummies can be used for training, cadavers provide the most realistic experience of performing surgery on a human being.

— Apart from training doctors, cadavers can also be used for developing new medical devices and studying the physiological impact of various diseases.

— Anyone over the age of 18 years can legally consent to become a cadaver donor. In case they are not registered as one at the time of death, their guardian or next of kin can still donate their body.

— Although those who have died of chronic illnesses are eligible donors, bodies of those with infectious diseases such as tuberculosis, sepsis, or HIV are unlikely to be accepted. The same is the case with bodies of organ donors. Lastly, medical colleges may also refuse to accept bodies of persons who have died due to unnatural reasons and are subject of a medico-legal case.

— There is no national organisation to track whole-body donations (unlike organ donation).

For Your Information:

— The Transplantation of Human Organs and Tissues Act, 1994 governs the transplantation of human organs and tissues in India, including the donation of organs after death.



INDIAN PUSH NEEDED TO END AIDS AS A GLOBAL HEALTH THREAT BY 2030: UNAIDS

Without India doing a large part of the heavy lifting, it is unlikely that the world will meet the Sustainable Development Goal of ending AIDS as a public health threat by 2030, said Eamonn Murphy, UNAIDS director for the Asia Pacific and other regions, in a written interview with The Hindu.

Noting that India has demonstrated high commitment and positive results in the last decades, he said that annual new HIV infections had fallen 44% between 2010 and 2023, better than the global average. However, HIV prevention efforts will need to be accelerated if India is to close the gap with a focus on specific States and districts, he said.

The UNAIDS director emphasised that the next five years would be critical for the country to accelerate efforts and share its experience with other countries in the region.

'Prevention is key'

Dr. Murphy, who was recently in India to discuss the challenges in HIV prevention with the Union government and other stakeholders, said that planning for long-term sustainability beyond 2030 was crucial to preserving the gains made and ensuring that the impact is durable and transformative.

"To achieve the goal of ending AIDS as a public health threat by 2030, we must not only diagnose and successfully treat people living with HIV but also dramatically lower new infections. Prevention is key. Every new infection means a person requires treatment for life. So, for a sustainable HIV response we must focus more on prevention," he said.

"We must also ensure that there are sustainable health systems for HIV and health which are co-designed and co-implemented by communities and civil society so they respond to people's needs," he added.

Dr. Murphy noted that last year, there were 68,000 new infections in India, meaning that around 185 people were infected every day.

"The global AIDS strategy calls for 80% of prevention services to be delivered by community-led organisations that are best placed to reach key populations. These organisations need the right space and resources to lead," he said.

New treatments

India has made notable progress in reducing annual AIDS-related deaths by nearly 80% between 2010 and 2023, which is also above the global average, he said.

UNAIDS is currently advocating for new technologies, including long-acting injectables, to reach all patients at affordable prices, he added.

CAN KERALA'S POLICY TO LIMIT ANTIBIOTICS MISUSE REDUCE AMR?

With the successful launch of Operation Amrith (Antimicrobial Resistance Intervention for Total Health) to completely stop the over-the-counter sale of antibiotics without prescriptions by the end of 2024, Kerala has seen a sharp decline in the irrational use of antibiotics in people. According



to media reports, there has been a sharp fall of Rs.1,000 crore in the sale of antibiotics through hospitals and medical stores across Kerala in the last year.

In early January this year, Kerala became the first State in the country to ban the over-the-counter sale of antibiotics without a prescription. By doing so, it was enforcing the Indian government's 2011 H1 rule to prohibit OTC sale of antibiotics without a prescription. The 2011 H1 rule prohibits the sale of all antibiotics—first, second and third-line—without a prescription. Even when the Indian government in 2013 tweaked the rule to allow first-line antibiotics to be sold over-the-counter without a prescription, Kerala enforced the 2011 H1 rule. The 2011 rule was modified by the Indian government to allow the sale of first-line antibiotics as a complete ban on OTC sales for all classes of antibiotics would have caused more harm than good— it would have greatly restricted access to even the first-line medicines, especially in remote places where doctors are not always available. Kerala was able to enforce the 2011 H1 rule as it has a high doctor-patient ratio, availability of doctors in most places, and vastly different healthcare-seeking behaviour of the people.

No other State has enforced even the modified 2013 H1 rule. Despite having a good patient-doctor ratio, there are pockets in the southern States where the availability of doctors is an issue and people cannot easily visit a doctor.

'Limited impact'

"Kerala's proactive measures against antimicrobial resistance (AMR) are laudable but the fight against AMR cannot be limited to one State. AMR knows no borders, and Kerala's efforts will have limited impact in reducing antimicrobial resistance unless neighbouring States too adopt similar policies," says Dr. Abdul Ghafur, Consultant in infectious diseases at the Apollo Hospital in Chennai, and Coordinator, Chennai Declaration on AMR. "Kerala should consider adopting the modified H1 rule of 2013, which monitors only second and third-line antibiotics while allowing the sale of first-line antibiotics without a prescription to continue without strict monitoring. This approach would balance the need for antibiotic stewardship with healthcare access and economic considerations, ensuring that Kerala sets a practical and scalable example for other Indian States." Currently, Kerala imports at least 60% of broiler chicken, eggs and vegetables from neighbouring States, many of which have no AMR regulations in place for humans, animals and agriculture. According to the Kerala State Planning Board report 2022-2027, vegetable production in the State meets just 40 % of Kerala's requirement. Similarly, Kerala produces only about 42% of the egg requirement while relying on other States for the balance. As per a June 2023 report in *The Hindu*, Kerala imports nearly 70% of broiler chicken from Tamil Nadu.

"Studies, including my own research, have shown that these imported food products often carry antibiotic residues and drug-resistant bacteria, which enter the human gut and transfer their resistance genes to other bacteria. This creates a continuous cycle of AMR spread, which undermines Kerala's local efforts," he says.

With no other State enforcing the national regulation on antibiotic use in agriculture and poultry, the production and spread of antibiotic-resistant bacteria will continue to be a major problem in India. With Kerala relying majorly on other States for vegetables, eggs and broiler chicken, the State continues to be vulnerable to the continuous import of antibiotic-laden products. "For Kerala's AMR efforts to have a lasting impact, there are two possible courses of action—Kerala should become self-sufficient and stop importing poultry, eggs and vegetables from other States



or it can work to convince the neighbouring States to implement strict AMR action plans,” says Dr. Ghafur.

Other States will begin enforcing strict AMR policies only if they can be implemented. The 2011 H1 rule, which prohibits the OTC sale of all classes of antibiotics, will not be implementable by other States. It is for this reason that Kerala has to step back and enforce the modified 2013 H1 rule to get the neighbouring States to enforce the rule and initiate the process of reducing antibiotic use in veterinary and agriculture. “The adoption of such a stepwise, adaptable model will ensure that Kerala’s efforts to combat AMR are not in vain and will inspire other States to follow suit,” he says. “Once the modified H1 rule is successfully implemented at least in the neighbouring States, these States can progressively work towards a more comprehensive ban on OTC antibiotic sales.”

WHICH ARE INDIA’S 5 NEW ‘CLASSICAL LANGUAGES’, WHAT DOES THE TAG MEAN?

The Union Cabinet on Thursday extended the “classical language” tag to Marathi, Pali, Prakrit, Assamese, and Bengali. Tamil, Sanskrit, Telugu, Kannada, Malayalam, and Odia already enjoy this status.

When and how did the concept of “classical language” arise?

Following demands from various states, the UPA-1 government decided to create a category of Indian languages known as “classical languages”, and lay down various criteria for this status.

On October 12, 2004, Tamil became the first Indian language to receive “classical” status due to its high antiquity and rich literary tradition.

In the following month, the Ministry of Culture set up a Linguistic Experts Committee (LEC) under the Sahitya Akademi to examine proposals for “classical language” status from various states and bodies.

On November 25, Sanskrit was declared a classical language. Subsequently, this status was conferred upon Telugu (2008), Kannada (2008), Malayalam (2013), and Odia (2014).

What are the latest criteria for “classical languages”?

On July 25 this year, the LEC unanimously revised the criteria for classical status. The criteria now includes:

- High antiquity of early texts, and recorded history over a period of 1500- 2000 years;
- A body of ancient literature/ texts, which is considered a heritage by generations of speakers;
- Epigraphic and inscriptional evidence;
- Knowledge texts, especially prose texts in addition to poetry; and
- That classical languages and literature could be distinct from its current form or could be discontinuous with later forms of its offshoots.



Following this, the committee recommended the addition of the five new classical languages, the proposals for which had been with the Centre for some years. This was approved by the Union Cabinet on Thursday.

What is behind the recent additions?

Marathi: With the state Assembly elections just weeks away, the inclusion of Marathi comes over a decade after the state government first forwarded the proposal to the Centre in 2013.

Modern Marathi descends from Maharashtri Prakrit, a Prakrit dialect used in western India which was the official language of the Satvahanas. Some Marathi scholars have claimed that this was the first among Prakrit languages, but this claim is contested. The oldest evidence of Maharashtri Prakrit can be found in a stone inscription in Pune district, dated to the 1st century BCE. The earliest evidence of the more modern Marathi can be traced to a copper-plate inscription found in Satara, dated to 739 CE.

Bengali & Assamese: The West Bengal and Assam state governments had also sought “classical” status for their respective languages.

Both these languages can find their origin in Magadhi Prakrit, a form of Prakrit popular in East India, and the official language of the Magadha court. The exact date in which they emerged is contested, with scholars putting forward dates of origin ranging from the 6th to the 12th centuries. They took on a form which may be recognisable today well into the second millennium CE. The legendary linguist Suniti Kumar Chatterji suggested that the Indo-Aryan vernacular likely differentiated itself in Assam before Bengal.

Prakrit & Pali: There is no single Prakrit language. Rather, the term refers to a group of closely-related Indo-Aryan languages, whose defining feature was that they were the language of the masses as opposed to Sanskrit, which was restricted to the elites and high literature. Historian A L Basham wrote in *The Wonder that was India* (1954): “By the time of the Buddha the masses were speaking languages which were much simpler than Sanskrit. These were the Prakrits, of which several dialects have been attested.”

These vernaculars were thus also the language of popular heterodox religions that emerged in the first millennium BCE.

Jain agamas and the Gatha Saptashati are in Ardhamagadhi, a Prakrit dialect which some scholars consider to be its definitive form. This Prakrit thus continues to have resonance among the Jain community, and still sees use in the religion’s ritual practices.

Pali, likely a form of somewhat Sanskritised Magadhi Prakrit, was the language of the Theravada Buddhist Canon — the Tipitakas. Considered to be the language of the Buddha himself, Pali survived in places like Sri Lanka, Myanmar, Thailand, Laos, and Cambodia, where the Theravada school prospered.

What will the ‘classical’ tag mean for these languages?

Officials say that the broader cultural and academic impact of this designation will extend nationally and internationally.

The Ministry of Education takes steps to promote classical languages. Three Central Universities were established in 2020 for the promotion of Sanskrit. The Central Institute of Classical Tamil



was set up in 2008 to facilitate the translation of ancient Tamil texts, and offer courses in Tamil. Similar Centres of Excellence have also been set up for the study of Kannada, Telugu, Malayalam, and Odia.

Officials told The Indian Express that the newly added classical languages will be promoted in a similar fashion.

The National Education Policy also calls for the inclusion of classical languages in school education. The Ministry of Culture (through the various academies), the Ministry of Education, and respective state governments, will come together for greater knowledge-sharing and research in these languages. Besides, manuscripts in these languages will be digitised for greater access to scholars, the officials said.

Some Interesting Facts

Prakrit and Pali are the two Classical languages that are not mentioned in the **eighth schedule** of the Indian Constitution.

8 PRODUCTS USED BY ASSAM TRIBE, INCLUDING TRADITIONAL FOOD ITEMS, GRANTED GI TAG

The Geographical Indications Registry in Chennai has granted the GI tag to eight products from Assam, including traditional food items and several unique varieties of rice beer.

The application for Geographical Indication tags for three variants of rice beer was filed by the Bodo Traditional Brewers Association.

The first variant, 'Bodo Jou Gwran', has the highest percentage of alcohol (about 16.11%) compared with other varieties of rice beer made by the Bodo community.

The second variant, 'Maibra Jou Bidwi', known locally as 'Maibra Jwu Bidwi' or 'Maibra Zwu Bidwi', is revered and served as a welcome drink by most Bodo tribes. It's prepared by fermenting half-cooked rice (*mairong*) with less water, and adding a little '*amao*' (a potential source of yeast) to it.

The third variant, called 'Bodo Jou Gishi', is also a traditionally fermented rice-based alcoholic beverage.

The GI filing states Bodoland has had a tradition of consuming rice beer since times immemorial. The Bodo people believe the drink originated from Lord Shiva, and it's taken as a medicine.

The Association of Traditional Food Products applied for four GI tags and obtained them successfully. A GI tag has been secured by 'Bodo Napham', a dish prepared with fermented fish.

A GI tag has also been secured by 'Bodo Ondla', a rice powder curry flavoured with garlic, ginger, salt, and alkali.

The 'Bodo Gwkha' has also received the GI tag. Locally also known as 'Gwka Gwkhi', it's prepared during the Bwisagu festival.

The fourth speciality given the GI tag is 'Bodo Narzi', a semi-fermented food prepared with jute leaves (*Corchorus capsularis*), a rich source of Omega 3 fatty acids, vitamins and essential minerals, including calcium and magnesium.



The 'Bodo Aronai', a small, beautiful cloth, also has the GI tag following the application by the Association of Traditional Bodo Weavers.

INDIAN ELEPHANTS LOST GENETIC VIGOUR AS THEY MOVED NORTH TO SOUTH, 5 DISTINCT POPULATIONS EXIST: STUDY

A TEAM of researchers from the Bengaluru-based National Centre for Biological Sciences (NCBS) and the Indian Institute of Science (IISc) has found that the Indian elephant migrated from the north to the south over many millennia and lost their genetic diversity progressively with each southward migration.

Published in the latest issue of Current Biology, the study analysed whole genome sequences from captive and wild elephant blood samples collected across India to identify five genetically distinct populations — one along the Himalayan foothills from the northwest to northeast, one in central India, and three in the south.

According to the last national census conducted in 2017, India is home to more than 29,000 elephants. While the three southern populations added up to 14,500 elephants, the central population was estimated at over 3,000. The northern population accounted for the remaining 12,000 — around 2,000 in the northwest and 10,000 in the northeast.

As evidence for Indian elephants migrating from the north to the south, the study — titled 'Divergence and serial colonization shape genetic variation and define conservation units in Asian elephants' — found that the northern elephant population diverged from all other Indian populations more than 70,000 years ago.

Indicating further southward dispersals over time, the central Indian elephants diverged from the rest more than 50,000 years ago and the divergence among the three southern populations dated back to only around 20,000 years.

As a result, explained Anubhab Khan, the study's lead author now with the IISc, Bangalore, the reduced genetic variation in the southern populations is possibly a manifestation of the serial founder effect, where fewer individuals from one population migrate to establish new populations and so on.

"As these populations become smaller, the risk of inbreeding depression increases—a phenomenon where harmful genetic variants are more likely to be inherited due to breeding among related individuals," Dr Khan said.

Aimed at identifying key populations that need tailored conservation strategies, the study underlined that India's southernmost population, found south of the Shencottah Gap that connects Tamil Nadu and Kerala, has the lowest genetic diversity. "This small isolated population of fewer than 150 elephants is potentially the most vulnerable to risks of extinction," said Professor Uma Ramakrishnan, one of the authors of the study from the NCBS, Bangalore.

Until now, the southern elephant population was believed to be divided by the Palghat Gap which acted as a natural barrier to elephant dispersal along the Western Ghats. Offering new insights, the study has revealed that the Shencottah Gap further south also acted as an impediment to elephant movement, resulting in three genetically distinct southern populations — one north of Palghat, a second between Palghat and Shencottah, and a third south of Shencottah.



The study also confirmed two elephant populations identified earlier. While the central Indian elephants (found between south-western West Bengal and eastern Maharashtra) formed the fourth genetically distinct population, the elephants in the Northwest (Uttarakhand and Uttar Pradesh) and Northeast India — largely separated from the rest of India by the Ganga and Brahmaputra rivers — constituted the fifth population.

Running west to east along the Himalayan foothills, the north Indian elephant landscape extends from Uttarakhand to Arunachal Pradesh. Though the connectivity between elephant habitats scattered in this landscape is now disrupted at many places, genetic evidence suggests that elephants lived here as one population for a long time since the ancestors of present-day Asian elephants moved from the plains of Africa into Eurasia and finally to Asia.

Underlining the urgency for maintaining habitat connectivity, Prof Ramakrishnan pointed out that recent infrastructure development might have further reduced gene flow among the three populations in the Western Ghats.

“The identification of these five genetically distinct populations underscores the need for region-specific conservation efforts,” she said, adding that the research team plans to develop a genetic toolkit, based on DNA extracted from elephant faeces, to help monitor populations more accurately and identify individual elephants in the wild.

HOW ELEPHANTS ARE COUNTED, WHY POLICY NEEDS A RETHINK

The Environment Ministry has shelved its elephant census report, ‘Status of Elephant in India 2022-23’, citing a delay in the census in the Northeast, The Indian Express reported this week. The report on the current status of the national heritage animal in the rest of India has been printed but its release is now on hold until at least June 2025.

Elephant numbers are down

Data from the unreleased report show a sharp decline in elephant populations in the east-central and southern landscapes. The slide in numbers is especially dramatic in Southern West Bengal (84%), Jharkhand (64%), Odisha (54%), and Kerala (51%).

The report identifies “mushrooming developmental projects” such as “unmitigated mining and linear infrastructure construction” as a significant threat to the species.

— Until 2002, elephants were counted in India by the “total direct count” method, which means a simple head count of elephants that were sighted.

— In 2002, the “indirect dung count method” was introduced in the southern states. Enumerators walked in pre-designated straight lines through the forest and recorded elephant droppings and the “dung decay rate”.

— Around the same time, the “total direct count” method was modified to “sample block counts” — or a survey of limited areas of 5 sq km each to maximise the probability of detection and enumeration of all elephants in that block.

— On the occasion of World Elephant Day (August 12) in 2021, Environment Minister announced that the government would “harmonise population estimation methods along more scientific lines” by “converging elephant and tiger population estimation” for the first time.



— Irrespective of the refinement in census methodology and the delay caused by logistical limitations, the results that are already available should not be held back, experts said.

— A retired forest officer from Odisha said the delay could prove costly for elephant populations in distress.

— The 2017 elephant census report had underlined why it was “desirable to maintain some level of continuity with the previous population estimations to make a meaningful comparison with past figures to infer broad trends”.

For Your Information:

— A reliable population estimate is a basic prerequisite for conserving endangered animals. However, most wildlife, especially large mammals, is not easy to survey — the animals are often camouflaged or on the move. That’s why enumeration methods, across the world, have to be refined frequently.

— The elephant’s habitat has undergone changes in recent years due to the conversion of forest areas to agriculture and development projects. As the WII report points out, fragmentation of habitats “has prompted long-ranging elephants to venture into unoccupied areas.”

— Unable to find food or dispersal areas, the large animals become crop raiders. Population estimates that map the animal’s distribution and herd structure — not just in reserve forests, but also in human-dominated landscapes — could be the first step to reduce such conflicts.

WHY ARE LANGURS DEPLOYED TO WARD OFF MONKEYS?

The Uttar Pradesh Cricket Association (UPCA) is literally up to some monkey business. On Friday (September 27), it hired langurs in an effort to ward off food-grabbing monkeys at Kanpur’s historic Green Park Stadium, the venue for the second Test match between India and Bangladesh.

For decades, it has been common practice to deploy Indian grey langurs (*Semnopithecus entellus*) to combat rhesus monkeys (*Macaca mulatta*). But why?

Matter of perception

Indians hold very different attitudes towards the two primate species, with rhesus monkeys treated with a lot more hostility than langurs. This is likely because, as research has shown, the former have shown greater propensity in urban spaces, and thus come into conflict with humans.

“Rhesus monkeys were engaged in significantly more feeding from human resources than langurs... only rhesus groups were recorded snatching food/stealing,” researchers Raghbir Singh Pirta, Madhav Gadgil, and A V Kharshikar, wrote in a 1995 paper which compared the status of the two species in Himachal Pradesh. On the other hand, “Although some langur groups inhabited towns... they were less habituated to humans... langurs are also considered as gentle creatures,” they wrote.

Langurs and rhesus monkeys are also often characterised as sworn enemies, with the latter believed to be scared of the black-faced, long-tailed primates. There is, however, no scientific evidence to back this claim. In fact, in natural settings, the two species are known to interact quite amicably.



In a 2012 paper, Michigan University researcher Ashish Nerlekar wrote that when feeding in their natural habitat, langur troops “do not object to the presence of” rhesus monkeys in the proximity. Nerlekar observed a rhesus monkey juvenile socialising and playing with an adult langur female in Madhya Pradesh’s Pench Tiger Reserve. Other researchers have also noted “significant play behaviour” between the two species, as well as instances of “inter-species grooming”.

Unethical, illegal practice

Using langurs to ward off rhesus monkeys is, thus, purely a product of Indians’ attitudes regarding the two species, and an enduring myth that they hate each other. It is not rooted in science.

But the practice remains in use because of what psychologists call “outcome bias” — evaluating a decision based purely on outcomes, rather than the merits of the decision itself. While it is true that langurs have proven to be effective against rhesus monkeys, this is not because of any innate qualities they themselves possess. For instance, there is no evidence that langurs’ larger size, black face, or long tails are scary for rhesus monkeys, as is commonly believed.

What makes langurs’ effective is their training, and rhesus monkeys’ general jumpy and nervous disposition (S D Singh & S N Manocha, “Reactions of the Rhesus Monkey and the Langur in Novel Situations”, 1966). And these primates have been effective enough for the practice to continue till date, despite serious ethical questions surrounding it.

Langurs that are captured to deal with the monkey menace are “torn apart from their families and habitat. Cramped in suffocating cages, tortured, and tamed — they are made to suffer,” an article on the website of conservation NGO Wildlife SOS said.

In 2012, the Wildlife Crime Control Bureau (WCCB) of the Ministry of Environment, Forests, and Climate Change, imposed a ban on the use of langurs to scare off monkeys. Not that langurs did not already enjoy legal protection — they are protected under the Wildlife (Protection) Act, 1972, the Prevention of Cruelty to Animals Act, 1960, and the Convention of International Trade in Endangered Species (CITES). Enforcement, however, has been lacking in most jurisdictions, leading to a state cricket association openly deploying langurs during an international cricket match.

Where authorities have chosen to follow the law, the likeness of the langur still remains their most potent weapon against rhesus monkeys. For instance, during last year’s G20 summit in New Delhi, municipal authorities used langur cutouts and impersonators — humans making langur calls.

Quick fix to bigger problem

Conservationists say that at best, the deployment of langurs is a temporary solution to a much larger problem.

Deforestation and urban expansion has greatly damaged monkey habitat. This has led to rhesus monkeys coming into more frequent contact with humans, whether it be in farmland or urban spaces. Their venerated status in Indian culture means that many people end up feeding them, while ineffective waste management in urban areas provides them with a steady source of food, and further incentive to settle around humans.

In the long term, this has led to conflict between humans and monkeys, who damage crops, take over urban spaces, and often attack humans. Monkey bites are the second most common animal bites in India (after dog bites), and account for as much as a fifth of all bite injuries. The Primate



Research Centre in Jodhpur in 2015 estimated that India's cities see about 1,000 monkey bites daily.

In this larger scheme of things, deploying langurs is simply ineffective to deal with the "monkey menace" at the scale at which the problem exists. Instead, conservationists advocate for better protection of their natural habitat, mass translocation measures, and curbs on feeding.

POLITICS OF AESTHETICS: HOW 'LAAPATAA LADIES' GOT A SHOT AT THE OSCARS

Towards the end of *Laapataa Ladies*, when Inspector Shyam Manohar foretells that Jaya, one of the two 'lost ladies', will go a long way, constable Dubey responds, "Indeed sir, she has to reach Dehradun." Since Kiran Rao's potent comedy of manners has been chosen as India's official entry to the Oscars this week, social media is abuzz with outrage from those who wanted to see Payal Kapadia's *All We Imagine As Light* on the road to Los Angeles. Taking umbrage to the trite citation that describes Indian women as 'a strange mix of submission and dominance', many X-crusaders — like Dubey — choose only to go by the text.

In the annual din on the selection process for the Oscars, one thing that gets lost is that the Academy Award for Best International Film is bestowed on the country and not an individual. The natural follow-up question is what idea of India do we want our films to represent at the Oscars? This brings the government of the day and the politics of aesthetics into the mix.

On choosing a nominee

The Film Federation of India (FFI), which picks the representative feature out of a competitive pool through a jury, is the apex body of the film industry that works with the government to promote, support, and protect the interests of the film industry. Therefore, the sentiment that seeks safety over sensitivity remains ambient. Whether the deciding authority can process the winds of change, where a Malayalam film gets short-listed by France and *Santosh*, a multi-national collaborative Hindi crime drama set in rural north India becomes the U.K.'s shot at the Oscars, and appreciate the spirit of *vasudhaiva kutumbakam* seeping into cinema, remains questionable. For now, it seems keen on saving the notion of sovereignty in cinema by leaning on what appears to be less adamant of the female voices that populated the list as *Kottukkaali*, *Ullozhukku*, and the National Award winner *Aattam* were also in the fray.

Read in context, the seemingly fossilised view expressed in the citation, that needed some serious proofreading, indicates the jury chose to reduce *Laapataa Ladies* to a story of two young girls, one happily desiring to be a homemaker and the other an entrepreneurially inclined rebel. When they get swapped during a train journey, the narrative allows a humorous exploration of identity and social constructs. A deeper reading suggests that the form and expression itself work like a safety pin to hold up the dissenting core of *Laapataa Ladies*.

If one deconstructs the structure of the social satire that turns the mainstream lost-and-found formula on its head, it feels like an onion, where the layers are the story but as long as you don't cut deep, tear ducts won't come into play. Lifting the veil on centuries of everyday patriarchy, it questions the practice of women covering their face among the majority community at a time when outside the theatres, power brokers are desperate to build a narrative around the hijab of Muslim women. Rao chooses to underline how patriarchy seeps through religious divides as a passing sequence captures a Muslim man talking of preserving identity while his wife's face is completely covered.



Abdul, the disabled beggar on the platform, is an observation of Muslims in the country, caught between persecution and persecution complex. Abdul is not what he looks like but that is his survival mechanism, not an insidious ploy.

Beyond mainstream politics

On the surface, the film is safely set in a fictitious place which feels like on the border of Uttar Pradesh and Bihar where a young Deepak has to get over his male ego to express his love for his wife Phool. One can feel how he pulls his entire weight to utter those simple three words in English.

The period is 2001 when Narendra Modi took over as the Chief Minister of Gujarat. In the opening train sequence, a passenger is reading a Hindi newspaper with the headline of PM Atal Bihari Vajpayee visiting Bhuj implying the period of the devastating earthquake. Had it been 2002, another debilitating event for our democracy would have been on the cover. This is not the first time that co-producer Aamir Khan has steered clear of Gujarat riots, in recent times. His last film *Laal Singh Chaddha* conveniently erased the episode even when creative honesty demanded otherwise.

It is not that the star with a voice has fallen silent. Along with Kiran, he has found newer ways to subvert. An independent filmmaker and the government share a mother-in-law and daughter-in-law type relationship. In the film, when an ageing daughter-in-law asks her mother-in-law whether they could be friends, the older lady tells her to give it a try. The film offers a hand by promoting organic farming and *beti padhao, beti bachao* but also shines a light on darkness beneath the slogans.

Through Manju Mai, the tea stall owner in the film who serves feminism in a *kulhad*, the film tries to save us from a fraud sold to young women in the name of tradition. But in its universe, some of the cynicism of the feminist Manju melts away when the 'submissive' Phool enters her space with the recipe of sweet *kalakand*.

Phool doesn't wilt because she has been trained in making someone else's kitchen her own.

However, Manju is no lawyer or social worker — noble professions that are seen with suspicion these days. She is an entrepreneur who has been hardened by the vagaries of life. Manju and Phool don't just develop a covalent bond but an electrostatic attraction — where they give and take. Like Kiran and Ravi Kishan, the BJP lawmaker and socially aware actor cast to portray the malleable system in the film. Or like Aamir and Jio Studios.

According to reports, the media and content arm of Mukesh Ambani-led Reliance Industries has garnered ₹700 crore at the box office in 2023-24. With 11 theatrical releases, 35 direct-to-digital releases, and eight original web series across languages and genres, the six-year-old company's output is bigger than any other film production company in the country. But, for now, they are just numbers. The Oscar nomination brings the credibility that the group seeks in the intangible space of culture. Its deep resources and network provide the small film the legs to last the expensive campaign to attract Academy voters and possibly explain the cultural nuances in storytelling.

After the *Lagaan* and *Taare Zameen Par's* experience, Aamir is wiser in making his investments. The audiences, meanwhile, are advised to take the message of the *Jagte Raho* call of the retired chaukidar of *Laapataa Ladies* seriously.



MITHUN CHAKRABORTY, PEOPLE'S STAR

Long before the 100-crore club became coveted territory and a benchmark for an actor's viability, Mithun Chakraborty was the first star to have been there, done that. That too, on a disco high, dressed in a glittering pantsuit, lip-syncing to Bappi Lahiri's 'Koi yahan nache' and to Vijay Benedict's runaway hit, 'I am a disco dancer'. B Subhash's Disco Dancer (1982) would gross over Rs 90 crore in the erstwhile Soviet Union alone. It would also be proof of Chakraborty's versatility — he had already won a National Award by then, for his debut film, Mrigayaa (1976). But the film industry in Mumbai was still tricky terrain. In the decades that followed, Chakraborty, this year's Dadasaheb Phalke winner, would turn this reputation on its head, choosing projects that guaranteed mass appeal and box-office returns. It turned Bengal's Mithun da into a working-class icon holding his own in the era of the Angry Young Man.

There is a certain kind of cultural elitism that scoffs at the cinematic representation of the tapori, a class sensitivity that overlooks the campy for the arthouse. Chakraborty's artistic success has been such that he can mould himself seamlessly into the demands of both. He has played Ramakrishna Paramahansa in G V Iyer's Swami Vivekananda (that won him his third National Award) with the same ease with which he slipped into the skin of MLA Fatakesto in Swapan Saha's eponymous movie, spawning a second-generation fandom that looks past the political vacillations that took him from Naxalism to TMC to the BJP.

Chakraborty has spoken often about his hardscrabble beginning — going hungry and sleeping on pavements, facing rejections. After the Dadasaheb Phalke award, he reiterated it once again — "...a man from literally nowhere, a nobody, made it". Could there be a stronger pitch for talent and perseverance?

HISTORY HEADLINE: STORY OF LOTHAL AND NEW PROOF ON ITS DOCKYARD

Lothal's archaeological record indicates its settlements were rebuilt multiple times. Rao identified five distinct phases in the site's stratigraphic record dated circa 2400-1900 BCE. At its peak, late 3rd millennium BCE, Lothal may have been home to 15,000 people.

Recently, researchers from IIT Gandhinagar uncovered fresh evidence that supports the existence of a dock in Lothal, one of the most important Harappan sites in India.

Since Lothal was first discovered in 1954, archaeologists have debated whether the roughly 215-m long and 37-m wide structure, excavated at the township's eastern edge, was a dockyard. ASI has always supported the dockyard thesis, but some scholars have argued that its size and inlet suggest more mundane usage. Here is the story of Lothal, and its "dock".

National identity is forged at the altar of history, a shared past acting as the glue that makes a "people". This is why the discovery of the Indus Valley Civilisation in 1924, which pushed back the history of India by more than 1,000 years, was a seminal moment for the nation. The sophistication of sites like Mohenjo-Daro and Harappa was a matter of pride for Indians, long seen as backward by colonial masters.

Unfortunately, this ancient civilisation was among the many casualties of Partition. With almost all known sites located around the Indus, suddenly, the civilisation Indians had proudly claimed as their own lay on the other side of the border. This sent ASI scampering for new sites in India.



The 1950s saw a flurry of archaeological activity. Among the many sites discovered, Lothal was the most significant. The site was excavated between 1955 and 1962.

Lothal, among southernmost Harappan sites, lies 80 km southwest of Ahmedabad, at the head of the Gulf of Khambhat. In Gujarati, “Lothal” loosely translates to the “place of the dead” — a name given by villagers who knew of the existence of an ancient settlement (and remains of the long dead) much before the site’s official discovery.

The Lothal excavations were led by S R Rao, among the finest Indian archaeologists of his generation who discovered over 30 Harappan sites. It is he who identified the excavated Lothal structure as a dockyard.

“The largest structure of baked bricks ever constructed by the Harappans is the one laid bare at Lothal... to serve as a dock for berthing ships and handling cargo,” he wrote in Penn Museum’s Expedition Magazine in 1965. “Originally, the dock was designed to sluice ships 18 m to 20 m in length and 4 m to 6 m in width... At least two ships could pass through the inlet simultaneously,” he added.

Other evidence that Lothal served as a hub for maritime commerce came from the presence of seals — more than in any other site in Kathiawar/Saurashtra — that were likely used to seal documents or mark packages, discovery of various items that were likely traded, a warehouse, and what Rao referred to as stone anchors for ships.

But not everyone was convinced. In 1968, anthropologist Lawrence S Leshnik posited the “port” was actually a reservoir for drinking water and irrigating crops. He held that the dimensions of the inlet for ships to dock were inadequate to support the draught (hull) of seafaring vessels. As was the depth of the “dock”. He also questioned the inlet’s orientation. “It is not understandable why the inlet should be in such a position that entering ships would have to take a 90 degree turn in order to berth,” he wrote.

The IIT-Gandhinagar study addresses some of these doubts.

Today, the Sabarmati flows into the Gulf of Khambhat about 20 km from Lothal. The ASI has long believed that the river used to run much closer to the Harappan town at some point.

Satellite imagery used by IIT-Gandhinagar researchers has “unveiled the old channels of river Sabarmati”, which used to flow right next to Lothal. The river gradually shifted its course, leaving the ruins of Lothal’s dockyard with a seemingly odd orientation. The study found that via the Sabarmati, boats could have sailed to as far as Dholavira, another important Harappan site in the Rann of Kutch.

This, the study said, put Lothal at the heart of a bustling trade network that stretched from India all the way to ancient Mesopotamia (modern-day Iraq), where the earliest Bronze Age civilisation flourished.

This is what Rao had theorised half a century ago: “Inhabitants exported agricultural and marine products and imported raw materials such as gemstones and metals, needed for domestic consumption and for supplying the processing industries which sustained a large population.”

Just like water brought Lothal prosperity as a commercial port, it also ushered in destruction.



Lothal's archaeological record indicates its settlements were rebuilt multiple times. Rao identified five distinct phases in the site's stratigraphic record dated circa 2400-1900 BCE. At its peak, late 3rd millennium BCE, Lothal may have been home to 15,000 people.

The decline, and eventual destruction of Lothal, occurred due to catastrophic flooding, and the Sabarmati changing course. As Rao noted in *Lothal: A Harappan Port Town* (1979), circa 2000 BCE, Lothal was submerged in a catastrophic flood — the acropolis was levelled and flood debris and silt destroyed buildings. Although people remained on site, the settlement was reduced to "an ill-planned village lacking essential civic amenities". Another flood destroyed the township for good circa 1900 BCE.

SHORT NEWS

MARK RUTTE

- On 1st October, Mark Rutte took office as the North Atlantic Treaty Organization's 14th Secretary General.
- He is a former Prime Minister of the Netherlands.

WITH WESTERN GHATS' FRAGILITY IN MIND, ENVIRONMENT MINISTRY'S EXPERT PANEL TO REVIEW PUMPED HYDRO PROJECTS

With the fragile ecology of the Western Ghats in mind, a Union Environment Ministry expert panel has decided that it will not grant final clearances to pumped hydropower projects proposed in the region without site visits to ascertain their impact on the environment.

AS INTERNSHIP PILOT GETS UNDERWAY, M&M, ALEMBIC & MAX LIFE KICK-OFF SCHEME BY LISTING POSITIONS FOR INTERNS

The Prime Minister's Internship scheme that aims to provide internship to one crore youth in top 500 companies over five years opened its portal for companies to register their internship opportunities for the pilot phase from Thursday (October 3).

ANNUAL SURVEY OF INDUSTRIES (ASI)

- The Ministry of Statistics and Programme Implementation (MoSPI) has released the Annual Survey of Industries (ASI) for 2022-23.
- It showed that the total number of employees in manufacturing industries increased by 7.5 per cent to 1.84 crore in 2022-23 from 1.72 crore in 2021-22. This is the highest rate of increase in employment in manufacturing industries in the last 12 years. The highest employment was recorded in factories producing food products, followed by textiles, and basic metals.
- According to the report, the number of workers employed in the informal sector in 2022-23 fell by 16.45 lakh, or 1.5 per cent, to 10.96 crore from 11.13 crore in 2015-16.

CENTRE PLANS COMMON INTEREST GROUPS, SOCIAL INFRA, MICRO-CREDIT FOR URBAN POOR WORKERS ACROSS 25 CITIES

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



The Centre is working on a new urban livelihood mission for vulnerable groups, including domestic workers, construction workers and gig workers, with common interest groups on the lines of self-help groups, social infrastructure projects and micro-credit access, The Indian Express has learnt.

Sources said the second version of the **Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)** is being planned to be rolled out next year. Before that, the Ministry of Housing and Urban Affairs will roll out a pilot project in 25 cities targeting construction workers, gig workers, waste management workers, care workers, domestic workers and transportation workers.

AYUSH MEDICAL VALUE TRAVEL SUMMIT 2024

- Ayush Medical Value Travel Summit 2024 was inaugurated in Mumbai on September 30.
- The summit's theme was 'Global Synergy in Ayush: Transforming Health and Wellness through Medical Value Travel'.
- The summit is organised by the Ministry of Ayush, Government of India, in collaboration with the Ministry of Tourism, the Government of Maharashtra, and key partner.

LEPTOSPIROSIS

- Punjab Chief Minister Bhagwant Mann has been diagnosed with leptospirosis and has been put on medication.
- According to the World Health Organisation (WHO), Leptospirosis is an infectious disease caused by bacteria belonging to the genus *Leptospira*.
- It is mainly a disease of animals that occasionally infect humans. The bacteria can be transmitted to humans through cuts and abrasions of the skin, or the mucous membranes of the eyes, nose and mouth with water contaminated with the urine of infected animals.
- Common animals that transmit Leptospirosis include farm animals such as cattle, pigs, and horses but can range from wild animals such as raccoons and porcupines to domesticated dogs.

HURRICANE HELENE

- Hurricane Helene has caused huge destruction in Southeastern United States.
- The storm triggered the worst flooding in North Carolina in over a century.

ARTI SARIN

- Surgeon Vice Admiral Arti Sarin became the first women doctor to hold the position of the Director General of the Armed Forces Medical Services (DGAFMS).
- The DGAFMS is directly responsible to the Ministry of Defence for overall medical policy matters which are related to the Armed Forces.



SHREYAMS KUMAR

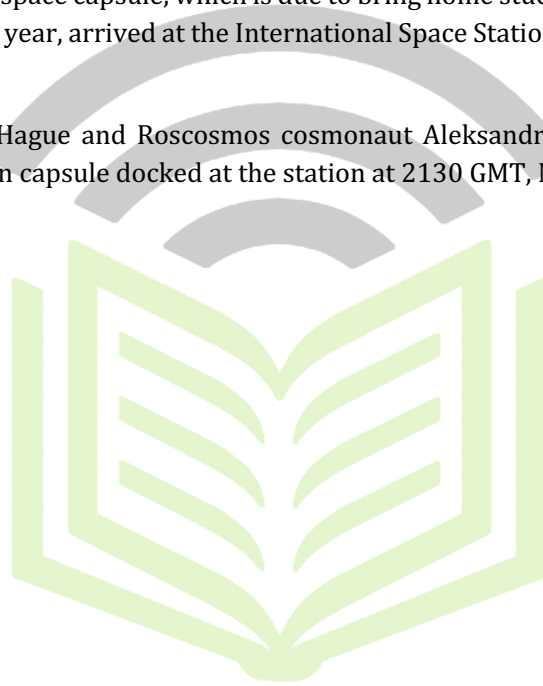
— M V Shreyams Kumar of Mathrubhumi was elected President of The Indian Newspaper Society (INS), an apex body of publishers of newspapers, magazines and periodicals in the country.

— The INS, earlier known as Indian & Eastern Newspaper Society, was inaugurated at a meeting of the representatives of the following founding publications on February 27, 1939, at the Statesman House, New Delhi.

SPACEX CAPSULE FOR STUCK ASTRONAUTS DOCKS AT SPACE STATION

A SpaceX Crew Dragon space capsule, which is due to bring home stuck astronauts Butch Wilmore and Suni Williams next year, arrived at the International Space Station (ISS) on Sunday, according to NASA and SpaceX.

NASA astronaut Nick Hague and Roscosmos cosmonaut Aleksandr Gorbunov boarded the ISS shortly after the Dragon capsule docked at the station at 2130 GMT, NASA said in a post on X.



DreamIAS



BUSINESS & ECONOMICS

HOW INDIA CAN DEAL WITH THE CHINA SHOCK 2.0

The early 2000s marked the beginning of the China Shock — a period that saw a massive surge in Chinese exports to global markets. While consumers benefited from the exports of lower priced products, the labour market consequences were not favourable. For instance, a study has estimated that the China shock was responsible for “59.3 per cent of all US manufacturing job losses between 2001 and 2019”. Much of these jobs were in the labour intensive segments that employed less skilled workers. The trade shock led to decline in labour force participation and wages in the affected regions. As per the study, those who lost their jobs “converted nearly one for one into long-term unemployment”. There are now fears of another China Shock coming.

With the Chinese economy slowing down, owing in part to weakness in the real estate sector, and low consumer demand, there are worries that the country is exporting its excess capacity, in the attempt to power its economy. The concerns are that this could lead to a China Shock 2.0 — as economists at the IMF have also articulated — and that the “surge in exports would displace workers and hurt industrial activity elsewhere”. Countries have responded by imposing tariff and non-tariff barriers. For instance, earlier this month, the Joe Biden administration finalised tariff hikes on Chinese products. According to the US Trade Representative’s office, a tariff rate of up to 100 per cent duty on electric vehicles, 50 per cent on solar cells, and 25 per cent on steel, aluminium, EV batteries and some minerals would now be levied. As per a report in this paper, India and some other countries have imposed anti-subsidy measures — this year alone the country has imposed more than 30 anti-dumping investigations against China. Such fears over another trade shock are gaining traction at a time when the US presidential election is drawing closer with the Republican nominee, Donald Trump, doubling down on the tariff issue. Trump has proposed to levy a 60 per cent tariff on all goods from China and 10-20 per cent tariff on other countries.

In India’s case, imports from China have surged, despite the imposition of restrictions. In 2023-24, imports from China exceeded \$100 billion, up from \$60 billion in 2014-15. Considering how China is inextricably linked to the global supply chains, it will be difficult for India to wean itself away. As per a report from Global Trade Research Initiative, over the last decade-and-a-half, China’s share in imports of industrial goods has increased from 21 per cent to 30 per cent. The reliance on imports is across product categories such as electronics, machinery and textiles. Governments in India have over the years attempted to boost the country’s manufacturing capabilities, attempting to reduce import dependence. However, the sector’s share in the economy has remained almost stagnant. While recent policies such as the production linked incentive scheme have seen some success, more needs to be done. Policies should be guided by the objective of boosting domestic manufacturing, improving competitiveness and addressing the long-standing structural impediments to the sector’s growth.

THE AMERICAN ALTERNATIVE

China’s Belt and Road Initiative (BRI), referred to as “Yi dai yi lu” in Chinese, has reshaped global infrastructure financing and investment. It promotes a “China-centred model” of development, which often does not set terms with regard to human rights, transparency or Western legal and market-based principles.



- Projects associated with BRI have frequently led to substantial financial obligations for participating countries. These arrangements typically involve long-term repayment commitments to Beijing, creating financial dependence on the People’s Republic of China (PRC or China) and giving the PRC significant leverage over host nations.
- China frequently prefers to extend or renegotiate loans rather than offer debt forgiveness, thereby maintaining or even increasing its economic and political sway over host governments. In contrast, institutions like the World Bank and IMF have shown greater willingness to forgive debt, particularly for highly indebted poor countries.
- The Hambantota Port in Sri Lanka has become a focal point in discussions about China’s lending practices and the stress they place on recipient countries.
- The Hambantota Port, strategically located in the Indian Ocean, is part of China’s broader geopolitical strategy to secure essential trade and energy supply routes. It is one of many PRC port projects in the Indian Ocean Region including Pakistan, Bangladesh, the Maldives and Burma.
- According to estimates by the Council on Foreign Relations (CFR), as of September 2023, China had active investments in 101 port projects globally. Among these, 10 are strategically located around the Indo-Pacific and can potentially be used for naval purposes.
- To counter China’s influence, the US International Development Finance Corporation (DFC) has emerged as a vital player. Last year, it committed half a billion dollars toward the development of the West Container Terminal in the Port of Colombo, which is the largest and busiest transshipment port in the Indian Ocean.
- Unlike China-based lenders, the DFC supports projects led by the private sector that are strategically and economically sound. Shipping and logistics are expected to contribute significantly to Sri Lanka’s GDP, sustaining more than 40,000 jobs and bolstering the country’s status as a global logistics centre.

For Your Information:

- 2023 marked a decade since China’s ambitious infrastructure funding project, the Belt and Road Initiative (BRI), was first outlined by President Xi Jinping.
- President Xi Jinping announced the Silk Road Economic ‘Belt’ during his visits to Kazakhstan in 2013. The ‘Belt’ plan was to revitalise a series of trading and infrastructure routes between Asia and Europe. Connectivity through Central Asia was a key element of the initiative.
- For some time, together these initiatives were referred to as the One Belt One Road Initiative (OBOR). Since 2015, it has been mostly referred to as the BRI.
- India’s position on the BRI has remained relatively consistent since 2013. From the beginning, India had reservations about the BRI – mainly due to sovereignty-related issues, as the CPEC goes through the Pakistan-occupied Kashmir (PoK), and geopolitical implications of projects in the Indian Ocean.



AS CHINA TIGHTENS GRIP, INDIA AND US SIGN AGREEMENT TO STRENGTHEN SUPPLY CHAIN FOR CRITICAL MINERALS

Amid rising concern over China's control of critical minerals, which allows it to dominate the clean tech supply chain, particularly in solar equipment and electric vehicle manufacturing, India and the US signed an agreement to strengthen the critical mineral supply chain.

This follows a series of unexpected curbs imposed by China, including restrictions on exports of gallium and germanium—products widely used in the semiconductor industry—and a ban on exporting technology for manufacturing rare earth magnets, as well as technology to extract and separate critical materials.

India's Minister of Commerce and Industry, Piyush Goyal, and US Secretary of Commerce, Gina Raimondo, signed a new memorandum of understanding (MoU) Thursday to expand and diversify critical mineral supply chains. The aim is to leverage the two countries' complementary strengths to enhance resilience in the critical minerals sector, according to an official statement.

"Priority areas of focus include identifying equipment, services, policies, and best practices to facilitate the mutually beneficial commercial development of US and Indian critical minerals, including exploration, extraction, processing and refining, recycling, and recovery," a statement from the US Department of Commerce said.

Speaking about the MoU at the Center for Strategic and International Studies in Washington, Commerce Minister Goyal described the partnership as multi-dimensional, encompassing open supply chains for materials, technology development, and investment flows to promote green energy.

Goyal further emphasised the need for India and the US to include other nations in the partnership, especially mineral-rich countries in Africa and South America.

"We will continue to expand cooperation in new areas and strengthen existing ones by capitalising on the immense opportunities for India-US trade and commercial partnership," the minister said in a social media post.

The agreement follows a recommendation from the US last month that India should "expand and protect" its clean energy manufacturing. India's Production Linked Incentive (PLI) schemes have invested over \$4.5 billion to catalyse nascent clean energy manufacturing; however, "additional policies are essential" to safeguard these investments against "global market dynamics" and "thin profit margins," according to a joint India-US statement.

The Economic Survey 2023-24 also noted that China's manufacturing trade surplus has been expanding since 2019 due to weak domestic demand and increasing industrial capacity. The mismatch between domestic supply and demand in China has widened in recent years, prompting Chinese companies to seek additional markets overseas.

Citing coercive actions taken by China to restrict India's access to solar equipment, the survey stated: "...in response to India's anti-dumping probe against Chinese entities, China has been quietly blocking India's access to solar equipment."



To protect domestic solar photovoltaic (PV) module manufacturing, including projects under the PLI scheme, the Ministry of New and Renewable Energy (MNRE) reinstated the Approved List of Models and Manufacturers (ALMM) order on April 1.

This order prevents domestic solar projects from using imported modules, primarily from China, which are sold at significantly lower prices. In June 2024, imported modules were priced at an average of 9.1 cents per watt (CIF basis), while domestic modules averaged 18 cents per watt, according to CRISIL.

Earlier last month, the ministry announced plans to extend the ALMM order to solar cells from April 2026. The PLI scheme for high-efficiency PV modules, with a total budgetary outlay of Rs 24,000 crore across two tranches, also incentivises solar cell production.

INDIA'S WORRY: LONG TRADE ROUTE, HIGH SHIPPING RATES, CORRIDOR RISKS

As the conflict in West Asia enters a new and unstable phase, with Iran launching a barrage of missiles on Israel overnight, both global and Indian traders are bracing for a prolonged disruption in trade, as the vital Red Sea shipping route may remain inaccessible to global shipping lines for a much longer duration than previously anticipated, potentially keeping freight rates uncomfortably high.

— A major escalation of the year-long conflict in West Asia has emerged after Israel, having seemingly concluded its military operation against Hamas in Gaza, shifted its focus to the larger and more powerful Iranian proxy, Hezbollah, by launching a military operation in Lebanon.

— While some see Nasrallah's assassination as a strategic victory for Israel, as the Hezbollah chief had emerged as one of the most important figures in the Arab world after being credited for being the only Arab force to stop Israeli forces during its 2006 invasion, others, including former Israeli Prime Minister Ehud Olmert in his interview with a TV channel, warned that the Israeli incursion into Lebanon will be "messy" and may conclude with "no clear-cut defeat of the Hezbollah militant group"

— The widening of the conflict has increased the risk of trade disruptions, as Hezbollah shares close ties with the Houthi rebels in Yemen, who are responsible for the majority of the **attacks on ships** traversing the Red Sea route. This assumes significance for India as it relies heavily on this route through the Suez Canal for its trade with Europe, the US, Africa, and West Asia, as these regions accounted for over \$400 billion in FY23, according to Crisil Ratings.

— Exporters have long feared a direct conflict between Israel and Iran as it would mean a protracted disruption of the crucial Red Sea shipping route.

— However, India's trade with West Asia has a silver lining due to the neutrality of regional players such as Saudi Arabia, the UAE, Kuwait, and Qatar, who have thus far remained uninvolved in the conflict.

— Since the Red Sea crisis began, Indian exporters have been asking the government to focus on developing an Indian shipping line of global repute. The request comes as India's outward remittance on transport services is increasing with rising exports.



— The widening conflict in West Asia could jeopardise the progress of the **India-Middle East-Europe Economic Corridor (IMEC)**, which was announced last year during the G20 meeting in New Delhi.

INDIA'S SAUDI OIL IMPORTS JUMP AS RIYADH LOOKS TO CLAW BACK SHARE LOST TO RUSSIA

“India’s crude oil imports recovered sequentially in September as a few under-maintenance refineries are slated to come back on stream in October. Notably, the sequential recovery in import volumes was led by Saudi Arabia, which has reduced its prices in a bid to claw back some of its lost market share in India, according to ship tracking data and industry watchers.”

— Oil imports from Russia—New Delhi’s largest source market for oil—also rose in September as India’s overall oil demand expanded.

— Oil imports from Saudi Arabia in September jumped 39.8 per cent month-on-month to 0.73 million barrels per day (bpd), the highest since March this year, per provisional vessel tracking data from commodity market analytics firm Kpler.

— Riyadh had been bleeding market share in India’s oil import basket due to the relatively higher price of its oil than the competing crude grades from other major suppliers—Russia and Iraq. In fact, in June, India’s Saudi Arabian oil imports had crashed to a multi-year low of 0.42 million bpd.

— Riyadh now appears to be making an attempt to win back part of its lost market share by offering its oil at a lower price. Market participants expect import volumes from Saudi Arabia to rise further in the coming months, so long as Riyadh is able to keep its barrels competitive for price-sensitive Indian refiners.

— According to sources in India’s refining sector, if Saudi Arabia gets more aggressive in its effort to increase market share in India, Indian refiners stand to gain as it would lead to increased competition among suppliers. This could force other major suppliers like Russia and Iraq to offer better prices to Indian buyers.

— India’s import of Russian crude rose 6.4 per cent over August to 1.88 million bpd, accounting for a staggering 40.2 per cent of New Delhi’s overall crude oil imports of 4.68 million bpd in September, which were 5 per cent higher sequentially.

— Iraq, India’s second-largest crude oil source market, delivered 0.87 million barrels per day in September, accounting for 18.7% of New Delhi’s total oil imports. Saudi Arabia increased its market share to 15.5% in September, from 11.7% in August.

For Your Information:

— Prior to the war in Ukraine, Iraq and Saudi Arabia were the top two suppliers of crude oil to India. But as the West started weaning itself off Russian energy supplies following Moscow’s February 2022 invasion of Ukraine, Russia started offering discounts on its crude and Indian refiners started snapping up the discounted barrels.

— As the world’s third-largest consumer of crude oil with a high import dependency level of over 85 per cent, India is extremely sensitive to oil prices.



NEPAL, INDIA, BANGLADESH SIGN TRIPARTITE AGREEMENT TO FACILITATE CROSS-BORDER ELECTRICITY TRADE

Nepal, India and Bangladesh on Thursday signed a tripartite agreement to facilitate cross-border electricity trade, officials here said.

— As per the agreement, Nepal will export its surplus electricity to Bangladesh via India from June 15 to November 15 every year.

— India will make arrangements to supply electricity from Nepal to Bangladesh. In the first phase, Nepal will export 40 MW of hydroelectricity to Bangladesh via Indian territory.

For Your Information:

— In June, to meet peak power demand during the unusually hot summer, the government has allowed the trading of surplus electricity generated from “linkage coal” in the country’s power markets.

— Coal linkages are typically made by the government to thermal units against long-term power purchase agreements (PPAs) with distribution companies (discoms).

— To sell their electricity, generation units in India have traditionally used long-term PPAs that typically span 25 years. These agreements commit generators to supply power to buyers, usually public utilities, at fixed rates.

— Power exchanges were first introduced in Europe in 1990-91, and they now operate in about 50 countries around the world. The Electricity Act of 2003 established the framework for exchange operations in India, and exchanges commenced in 2008.

— The spot market was introduced in 2020, which further enhanced the flexibility and responsiveness of the power trading system.

SC LAYS DOWN ‘FUNCTIONALITY’, ‘ESSENTIALLY’ TEST TO CLAIM ITC

The Supreme Court on Thursday declared that real estate companies can claim Input Tax Credits (ITC) under the Goods and Services Tax (GST) regime, on costs of construction for commercial structures intended for renting or leasing purposes.

The judgment would give a fillip to the real estate sector. “If a building qualifies to be a plant, ITC can be availed against the supply of services in the form of renting or leasing the building or premises, provided the other terms and conditions of the CGST Act and Rules framed are fulfilled,” Justice Oka held.

The court, however, noted that if the construction of a building by the recipient of service was for his own use, the “chain would break and ITC would not be available”.

“Under the CGST Act, renting or leasing immovable property is deemed to be a supply of service, and it can be taxed as output supply. Therefore, if the building in which the premises are situated qualifies for the definition of plant, ITC can be allowed on goods and services used in setting up the immovable property, which is a plant,” Justice Oka reasoned.



The court said the question whether or not a mall, warehouse or any building other than a hotel or a cinema theatre could be classified as a 'plant' within the meaning of the expression "plant or machinery" in Section 17(5)(d) of the Central Goods and Services Tax Act, 2017 was a factual question.

This has to be determined keeping in mind the business of the registered person and the role that building plays in the business. "Functionality test will have to be applied to decide whether a building is a plant," the judgment noted.

WHAT HAS MAKE IN INDIA ACHIEVED?

On September 25, 2014, the newly elected Union government initiated the Make in India (MI) policy with two objectives: (i) to raise the manufacturing sector's share in GDP to 25% (from 14%-15%), and (ii) to create 100 million additional industrial jobs (from about 60 million) by 2025. The policy was similar to the New Manufacturing Policy 2012, formulated but not implemented. The policy context: though India's annual real (net of inflation) GDP growth rate had accelerated to 7%-8% during the previous decade with rising export share, especially during 2003-08, manufacturing sector performance was modest, with increasing net imports and modest employment expansion.

Ten years on, what are the policy outcomes?

According to the National Accounts Statistics (NAS), the manufacturing real gross value added (GVA) growth rate has slowed down from 8.1 during 2001-12 to 5.5% during 2012-23. The sector's GDP share has stagnated at 15%-17% over the last three decades, though it is slightly higher in the latest GDP series due to methodological changes.

As per the NSSO sample surveys, manufacturing employment has declined from 12.6% in 2011-12 to 11.4% in 2022-23. Unorganised or informal sector manufacturing accounts for most employment, declining by 8.2 million, from 38.8 million in 2015-16 to 30.6 million by 2022-23, as per surveys of unincorporated sector enterprises. Agriculture's share in the workforce increased from 42.5% in 2018-19 to 45.8% in 2022-23.

The preceding reversal of structural transformation from a higher to a lower productivity sector is unprecedented in post-independent India. It is the clearest sign yet of premature de-industrialisation, that is, before attaining industrial maturity as in the advanced countries.

Why is India deindustrialising? Why did industrial production growth plummet despite the official real GDP growth rate of 6%-7% annually? Fixed investment growth practically collapsed.

Annual growth rate in GVA and gross fixed capital formation (GFCF) from 2012-13 to 2019-20 as per National Accounts Statistics (NAS) and Annual Survey of Industries (ASI): We focus on time-tested ASI figures as the NAS figures are overestimated due to methodological problems. The industrial output growth rate is much lower than the official NAS-based estimates. The GFCF growth rate during the period is practically zero. Unsurprisingly, booming imports, mainly from China, have met the demand.

Why did not domestic investments grow under MI, despite India's rank in the World Bank's Ease of Doing Business (EDB) index, improving from 142 in 2014-15 to 63 in 2019-20? Because EDB is a bogus, politically motivated index with little analytical or empirical foundations. With hindsight, the government squandered away six precious years chasing a dubious index.



The key to reversing de-industrialisation is re-imagining industrial policy to align trade and industrial policies to promote domestic value addition and learning. Protection policies must promote securing a dynamic comparative advantage, not offer cash subsidies to gain a static comparative advantage. India must aim at investment-led growth and technological catching up. They must be supported by domestic R&D to promote adaptive research and the indigenisation of imported technology. Publicly funded development finance institutions or “policy banks” are needed to provide affordable long-term credit for socialising the risks of learning and catching up with the technological frontier.

SURVEY: MANUFACTURING INDUSTRIES’ JOB GROWTH AT 12-YEAR HIGH IN FY23

The Annual Survey of Industries (ASI) for 2022-23, released by the Ministry of Statistics and Programme Implementation (MoSPI) Monday, showed that the total number of employees in manufacturing industries increased by 7.5 per cent to 1.84 crore in 2022-23 from 1.72 crore in 2021-22.

— This is the highest rate of increase in employment in manufacturing industries in the last 12 years.

— The highest employment was recorded in factories producing food products, followed by textiles, basic metals, wearing apparel, and motor vehicles, trailers and semi-trailers, the latest ASI data showed.

— According to the survey, the total number of factories increased from 2.49 lakh in 2021-22 to 2.53 lakh in 2022-23, which was the first year marking the full recovery phase after the Covid-19 pandemic.

— In comparison, the number of workers employed in the informal sector in 2022-23 had dropped by 16.45 lakh or about 1.5 per cent to 10.96 crore compared to 11.13 crore in 2015-16, as per the Annual Survey of Unincorporated Enterprises (ASUSE) 2022-23 released in July this year.

— The ASI data is the principal source of industrial statistics and data for organised manufacturing. It relates to factories employing 10 or more workers using power and those employing 20 or more workers without using power.

— The definition is slightly tweaked for states of Maharashtra, Rajasthan and Goa, wherein data is collected for factories employing 20 or more workers with power and factories having 40 or more workers without power.

— The Ministry said the main drivers of the manufacturing growth in 2022-23 were industries related to basic metal, coke & refined petroleum products, food products, chemical and chemical products and motor vehicles.

— The estimated number of persons engaged in the manufacturing industries in 2022-23 is higher than the pre-pandemic level of 2018-19 by over 22.14 lakh, the Ministry said.

For Your Information:

— While India’s services exports constitute 4.3 per cent of the world’s commercial services exports, goods exports barely account for 1.8 per cent of the global goods market, resulting in low job generation in the manufacturing sector.



— This is particularly concerning, as India has been unable to capitalise on the opportunity presented by China’s exit from low-skill manufacturing between 2015 and 2022.

— Despite a decrease in China’s participation in low-skill manufacturing of apparel, leather, textiles, and footwear, countries such as Bangladesh and Vietnam, and even advanced economies like Germany and the Netherlands, have become the primary beneficiaries of China’s shrinking market share.

DEMAND FLUX

India’s resounding 8.2% GDP growth in 2023-24 came with two worrying portents. The farm sector lost momentum due to an unhelpful monsoon, and private consumption spends rose at less than half the economy’s pace. In fact, the 4% growth in private final consumption expenditure (PFCE) was the weakest since 2002-03, if one excludes 2020-21, when COVID-19 first hit the world. Of course, some of this stemmed from the farm sector’s rain woes that weighed down rural demand, while economists flagged a K-shaped consumption pattern of higher-end goods and services seeing greater offtake than the rest. A normal monsoon this year, it was hoped, would help the farm sector and rural demand rebound, and shore up overall consumption to levels that spur growth as well as hasten an uptick in industrial capacity utilisation rates to thresholds that compel private investors to ramp up. This much-awaited outcome is vital for the virtuous cycle of more investments leading to more jobs and higher consumption to kick in.

Growth numbers for the first quarter suggested this story was playing out, with the PFCE rising at a seven-quarter high of 7.4%, outpacing the 6.8% GDP uptick. Rural demand signals such as two-wheeler sales also perked up. India Ratings reckons that real rural wage growth turned positive in July and is expected to stay positive, aided by cooling inflation. This bodes well for consumption. However, a twist in this tale may be imminent, with urban demand beginning to show some fatigue. Last Tuesday, S&P Global Ratings, which expects India to grow 6.8% this year (lower than the 7.2% rise penned in by the Reserve Bank of India), said high interest rates are tempering urban demand. The RBI’s consumer confidence survey for July shows a turn in the tide, with current and future confidence levels of urban buyers dropping. The Finance Ministry has taken note too, pointing to a dip in passenger vehicle sales through April to August as a barometer of stuttering urban demand. The trend warrants monitoring, it said, while expressing hope that festive fervour could trigger a course reversal. With wallets crimped by persistently high food inflation (that also clouds rate cut hopes), the ability of urban Indians to create room for discretionary spends through the festive season and beyond would be critical for growth as well as the virtuous private investment cycle. With global oil prices turning benign, the Centre must consider passing through the reduced costs to consumers, and cut levies embedded into retail fuel prices. A substantive fuel price cut, as opposed to the token two rupees of relief per litre unveiled this March, can support demand in the economy.

WITH LONG DELAYS AND STEEP HAIRCUTS, CHORUS FOR REVAMPING IBC GROWS LOUDER

India’s G20 Sherpa Amitabh Kant’s call for reforms in India’s insolvency resolution framework to cut delays and boost creditor recovery is latest in the growing chorus for making the Insolvency and Bankruptcy Code more effective.



— Introduced in 2016, the code promised an overhaul of insolvency resolution with the aim to rescue and reorganise distressed companies through a time-bound process, prioritising their survival as going concern.

— Eight years on, while the IBC has had a few successes, it is marred by issues like high case backlog, lengthy delays in admission and resolution, and steep haircuts for creditors. In the recent past, various stakeholders, including RBI Governor Shaktikanta Das and the Parliament's Standing Committee on Finance, also flagged concerns and the need to rethink the IBC's design.

— While the IBC has fostered a culture of accountability and credit discipline among debtors, its efficiency is being undermined by procedural delays, shortage of personnel, deviations from key principles, and slow implementation of critical provisions.

— **Procedural delays:** "We must acknowledge some concerns regarding the present functioning of the IBC, indicating a need for a second generation of reforms. Analysis of IBBI's (Insolvency and Bankruptcy Board of India) own data shows that insolvency resolutions at the National Company Law Tribunal (NCLT) averaged 716 days in FY24, up from 654 days in FY23," Kant said Monday. The prescribed resolution timeline is 330 days.

— In February 2024, the Standing Committee on Finance had flagged delays and their impact on the value of stressed assets and called for a review of the IBC's design.

— **Steep haircuts:** There is an inverse relationship between resolution time and debt recovery. As of March 31, cases resolved within 330 days saw a recovery rate of 49.2 per cent of admitted claims. For those resolved between 330 and 600 days, the recovery rate was 36 per cent. For those exceeding 600 days, the recovery rate was just 26.1 per cent.

— Apart from value erosion for creditors, experts argue that delays are pushing outcomes towards liquidation, defeating the process's raison d'être.

— IBBI chairperson Ravi Mital recently said IBC cases take time as it is a creditor-led model, not debtor-led, and "the debtor tries his best to ensure that the case is not admitted", which leads to late admissions and consequently higher value erosion and haircuts for lenders.

— **Legal issues:** While the NCLT should ideally decide on whether a case can be admitted under the IBC within 14 days of an insolvency application, it often takes months and sometimes even over a year to initiate insolvency proceedings. The reason, at least partly, is legal in nature.

— **Human resource crunch:** It is no secret that the system is choked and understaffed, with NCLT benches grappling with heavy case burden. While there has been an effort from the government to improve the staffing situation, it is still nowhere close to what is needed.

— Kant emphasised the need to "clarify ambiguity on key legal principles," particularly regarding the supremacy of the Committee of Creditors' (CoC) commercial judgement and the established priority of claims.

— The government is already considering amendments to the IBC after a comprehensive review was undertaken last year. According to Kant, India should also consider moves like outsourcing court management for insolvency proceedings to private players.



MEASURES ANNOUNCED BY SEBI SHOULD LIMIT INDIVIDUAL TRADING IN F&O SEGMENT

For some time now, there has been concern about the surge in trading in the Futures and Options segment. In recent years, trading volumes in the Indian derivative markets have, in fact, been significantly outstripping the cash market, as documented in a report by Axis Mutual Fund. The report had also pointed out that the derivatives to cash volumes ratio in India was considerably higher than in other countries. Much of this increase has been driven by retail investors, most of whom have lost money in this segment, yet have continued to trade. As per a recent study by the stock market regulator, while 1.13 crore individuals have lost a staggering Rs 1.81 lakh crore trading in the F&O segment during the last three financial years, more than three-fourths of those who lost money in the preceding two consecutive years, continued to trade. This has been a source of concern in the policy establishment. The Economic Survey 2023-24 noted that as trading in these segments has the possibility of generating huge gains, it “caters to humans’ gambling instincts”. It is these considerations, the Survey argued, that “are likely driving active retail participation in derivatives trading.” In July, the Union budget raised the securities transaction tax on futures and options of securities — on futures from 0.0125 per cent to 0.02 per cent and on options from 0.0625 per cent to 0.1 per cent. In the same month, Sebi released a consultation paper that proposed steps to curb speculative trading in derivatives. And on Tuesday, it announced measures to tighten the norms around trading.

Six measures have been introduced. These range from increasing the contract size for index futures and options to Rs 15 lakh from Rs 5 lakh to Rs 10 lakh currently, to the upfront collection of option premium, rationalisation of weekly index derivatives products, and monitoring of position limits during the day, especially when there are large trading volumes on the expiry day, among others. Seen together, these measures are designed to raise the entry barrier for investors, making it more expensive to trade in the F&O segment. After all, a recent study by the stock market regulator had pointed out that roughly three-fourths of the traders — 65.4 lakh out of the 95.75 lakh individual traders — have a declared income that is less than Rs 5 lakh.

The implementation of these measures is to be carried out in a staggered manner over the coming months — three will be implemented in November, two in February and one in April. This will give market participants time to adjust. There are expectations that these measures could act as a significant drag on trading, bringing down volumes. This could ensure that household savings are channelled into more productive investments.

FOOD THAT DOESN'T FEED

Ashok Gulati, Raya Das writes— “The United Nations has designated September 29 as the International Day of Awareness of Food Loss and Waste (FLW). Events to mark the day are jointly convened by the Food and Agriculture Organisation (FAO) and the United Nations Environment Programme (UNEP) because the issue has important implications for food security and saving our environment.”

— “An FAO, 2023 report estimates that food lost between harvest and retail amounts to 13.2 per cent of the global food production. Interestingly, UNEP estimates that 17 per cent of food is wasted between retail and feeding people. Together, the food loss and waste (FLW), amounts to about 30 per cent of the global production. Even if half of this food is saved and used, it could easily feed all the hungry people in the world.”



— “Such savings could also help reduce at least eight to 10 per cent of the world’s greenhouse gas (GHG) emissions and 38 per cent of total energy usage, making our planet breathe better. Both these dreams remain unfulfilled. Therefore, it is important to be aware of these potential benefits and commit ourselves to reducing FLW by at least 50 per cent, thus contributing to the Sustainable Development Goals (SDGs) of the United Nations.”

— “The study shows that food loss largely occurs during harvesting, threshing, drying and storage stages, predominantly due to low levels of mechanisation and inadequate logistics infrastructure.”

— “Farmers who use combine harvesters, for instance, see a marked reduction in paddy losses compared to those relying on traditional manual methods. The study reveals that overall loss in paddy drops to just 2.84 per cent if mechanisation in harvesting and drying is adopted at the farm.”

— “To promote farm mechanisation, Farmer Producer Organisations (FPOs) and Custom Hiring Centres (CHCs) can play a crucial role through group leasing arrangements and the “uberisation” of farm machinery.”

— “In a country where climate change and malnutrition still pose a major challenge, it would be only wise to focus on reducing FLW. Reducing post-harvest losses is not just a matter of improving economic efficiency, but also providing food security to people while building resilience in our food systems. Thus, save people and save the planet.”

A RICE VARIETY THAT CAN ADDRESS FARM FIRES IN PUNJAB AND HARYANA: HERE’S HOW

Harpreet Singh has been cultivating Pusa-44 paddy since 2000, if not earlier. “Why not, when it yields 35-36 quintals grain per acre, and even 40 quintals in some of my land?,” the 39-year-old from Bourhai Kalan village in Punjab’s Malerkotla district remarked.

Bred by the Indian Agricultural Research Institute (IARI) at New Delhi, and released for large-scale cultivation in 1993, Pusa-44 takes 155-160 days to grow, from the time of sowing its seeds in nurseries to harvesting the grain.

The high yields — more than the 30-32 quintals per acre that its nearest competitor, the Punjab Agricultural University’s PR-126, gives over just 123-125 days — is Pusa-44’s main attraction for farmers. Although taking 30-35 days longer to mature, the extra 4-5 quintals yield is worth Rs 9,280-11,600 (per acre) at the Centre’s minimum support price of Rs 2,320 per quintal for ‘Grade A’ paddy.

Pusa-44’s environmental cost

But there is a cost to the high yields. The Pusa-44 paddy, transplanted in mid-June after nursery-sowing a month before, can be harvested only towards end-October. This leaves little time for field preparation to sow the winter wheat crop, which should ideally be done before mid-November. Most farmers, then, resort to burning the loose straw and standing stubble that remains after harvesting using combines.

The narrow turnaround window between paddy harvesting and the optimal sowing of wheat is at the root of farm fires in Punjab and Haryana — and the severe air pollution it contributes to in much of northern India — from late-October to mid-November.



The problem is more with the cultivation of Pusa-44, which covered an estimated 14.8% of Punjab's total non-basmati paddy area in 2023. That was lower than the 22% of 2022 and 39% in 2012, and even PR-126's 33% share last year. Yet, it remains the farmer's first choice, especially in the south-central districts of Sangrur, Malerkotla, Barnala, Ludhiana and Moga. While the Punjab government has banned Pusa-44 from this crop year, with the IARI also not supplying breeder material for further multiplication after 2021, farmers are still growing it — using saved grains from the previous crops as seed.

In the current season, Harpreet Singh has sown Pusa-44 on 90 out of his 100-acre holding, transplanting these between June 10 and June 24 for harvesting from around October 20 to November 2. Singh does not burn the stubble: "I plough it into the soil using a Super Seeder, which also sows the wheat seeds in a single pass".

Not all farmers, though, can afford such expensive tractor-drawn machines. For them, stubble burning remains the least costly and most time-saving option to clear their fields.

Pusa-2090: A viable replacement?

IARI has bred a new improved shorter-duration variety, Pusa-2090.

A selection from a cross between Pusa-44 and CB-501, an early-maturing Japonica rice line, it has a seed-to-grain maturity of 120-125 days. That's the same as PR-126, but Pusa-2090's paddy yield of 34-35 quintals per acre — now being tested in farmers' fields — is closer to Pusa-44's.

Agricultural scientists have, for long, worked at introducing genes from Japonica (a rice subspecies of East Asia) to the Indica varieties (grown in India and other tropical/subtropical regions) for improving yields and disease resistance. In this case, CB-501 was identified as a male parent line primarily for contributing to earliness (50% of its plants flower in 80 days, as against 120 days for Pusa-44). The resultant cross, thus, combined Pusa-44's high yields with CB-501's lower duration.

"Yields are a function of the number of tillers (branches with grain-bearing ear-heads or panicles) that each plant produces; the number of grains per panicle; and the weight of every 100 grains. The number of tillers per plant and filled grains per panicle are roughly the same in Pusa-44 and Pusa-2090 (around 30 and 260 respectively), while more than that for PR-126 (20 and 200)," A K Singh, former director of IARI, told

Given the lower yield penalty vis-à-vis Pusa-44, and duration comparable to PR-126, farmers may find it viable to cultivate Pusa-2090. The new variety also has a strong culm (main stem) that makes it less prone to lodging (bending over or falling due to heavy winds and rains) than PR-126. It is highly responsive to the application of nitrogen (urea), again a trait shared with Pusa-44. And its maturing some 35 days earlier translates into significant water savings, with at least 5-6 less irrigations required against the normal 29-30 for Pusa-44.

What farmers think

Harpreet Singh last year planted Pusa-44 on 90 and PR-126 on 10 acres. This time, he has grown Pusa-2090 in place of PR-126 on the same 10 acres.

"I sowed my nursery on June 2 and transplanted on June 28-July 2. As of now, I am expecting a grain yield of 35 quintals, but we will really know only after the crop is harvested by October 4-5 and weighed," Singh said.



Harvesting paddy in early-October should give Singh plenty of time to sow wheat. But he plans to plant potato instead; the 'Diamond' variety sown in mid-October would be ready for harvesting by mid-February. "After that, I will immediately plant Dekalb-9108 (a maize hybrid) for harvesting in 80-85 days towards mid-May," he added. Farmers wanting to only take wheat after paddy can transplant Pusa-2090 even in mid-July.

Sukhjeet Singh Bhangu, a farmer with 20 acres of land in Kanakwal Bhanguan village of Sangrur's Sunam tehsil who also grows and markets seeds under his 'A-One' brand, felt that Pusa-2090 may replace Pusa-44 in the areas where it is still dominant: "Most farmers will hesitate growing a banned variety, for fear of it not being procured by government agencies. If Pusa-2090 gives 34-35 quintals, which is almost as much as Pusa-44 and above PR-126, they would go for it".

Vikas Chaudhary, a seed grower from Taraori village in Nilokheri tehsil of Haryana's Karnal district, harvested 35 quintals of paddy from his one-acre trial plot under Pusa-2090 last year: "That was good, as the grains had only 13% moisture (against the normal 16-17% content). This year's crop (nursery-sown on June 6 and transplanted on July 6) should also yield around that level".

Farm yields apart, there is also the issue of milling quality. "PR-126 paddy isn't liked much by millers because the rice recovery from it is hardly 63%, whereas the government's required norm is 67%. If Pusa-2090's grain quality matches that of Pusa-44, there will be acceptability for it from the millers' side too," Bhagwan Dass, secretary-general of the Rakhra (Patiala)-based Young Farmers Association Punjab, pointed out.

EXPORT BAN ON NON-BASMATI WHITE RICE LIFTED: WHY, WHAT IS THE LIKELY IMPACT

The Centre Saturday (September 28) lifted the ban on export of Non-Basmati White Rice. It has, however, imposed a minimum export price (MEP) of \$490 per tonne.

— The export ban had come amid a marginal dip in rice production and the looming threat of an erratic monsoon last year.

— This year, sowing of paddy during the ongoing kharif season has been higher, the crop is normal, and a bumper output is expected. Wholesale prices are down, while the Central pool is well-stocked. Factors behind this are:

1. Higher sowing
2. Record production
3. Declining wholesale prices, stable retail inflation
4. Surplus stocks

— Along with easing export restrictions, the Centre has also allowed state governments to buy rice for their welfare schemes, and distilleries for ethanol making.

— Before its export was banned, Non-Basmati White rice constituted about 25 per cent of the total rice exported from the country. The lifting of the ban will help traders, who, if they were at all exporting, were paying a 20% duty. It will boost export sentiment and may benefit farmers who grow non-Basmati premium varieties like Sona Masoori (mainly grown in Karnataka, Andhra Pradesh and Telangana), which was hit by the ban.



- For domestic consumers, retail prices, which are already elevated, may further go up.
- The Centre had allowed exports “on the basis of permission granted” to meet the food security needs of other countries, based on the request of their governments.
- Thus, the rice was being exported, through the newly formed National Cooperative Export Limited (NCEL), to United Arab Emirates (UAE), Bhutan, Mauritius, Singapore, Nepal, Cameroon, Cote d’Ivoire, Republic of Guinea, Malaysia, Philippines, and Seychelles, among others.
- Two east Asian countries—Thailand and Vietnam—are the two main competitors of India in the global rice market. In 2023, the combined rice export of these two countries was almost equal to Indian exports. Besides, Pakistan, Cambodia and the United States are also in the list of rice exporters.
- India’s rice exports are broadly categorised into basmati and non-basmati rice. The non-basmati rice category includes six subcategories— rice in husk of seed quality; other rice in husk; husked (brown) rice; rice parboiled; non-basmati white rice; and broken rice.

For Your Information:

- India is the second-largest producer and the biggest exporter of rice. Basmati accounts for almost one-third of India’s total rice export.
- India, along with China, accounts for over half of the world’s rice production. China, however, is also the biggest consumer of rice, leaving little for exports.
- According to the United States Department of Agriculture (USDA), India accounted for 33 per cent (17 million tonnes) of the world’s total rice exports (53 million tonnes) during the calendar year 2023.
- Philippines, Indonesia, Vietnam, China, European Union, Nigeria, Iraq, Saudi Arabia and Malaysia are the top rice importers.

ON SIPCOT AND TAMIL NADU INDUSTRIES

The story so far:

On September 28, Tata Motors Group, producer of commercial and passenger vehicles, held the groundbreaking ceremony of its new, world-class production facility to manufacture cars and SUVs, at the State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) industrial park at Panapakkam in Ranipet district, Tamil Nadu. This is Tamil Nadu’s 50th SIPCOT industrial park and the 27th SIPCOT park of the Dravida Munnetra Kazhagam (DMK) government. The Tamil Nadu government has set a target of becoming a \$1 trillion economy by 2030 and SIPCOT will play a crucial role in helping the State reach this goal.

Why was SIPCOT formed?

SIPCOT was established on March 25, 1971 with the objective to plan, develop, operate and promote industrial growth in Tamil Nadu. It was started with a vision to promote medium and large scale industries in Tamil Nadu, as the State was in the nascent stage of its industrial growth with the initial success of the MSME sector. The first industrial park was established in Ranipet in 1973, with the land extent for the first phase here being 729.79 acres. Thirumalai Chemicals Pvt.



Ltd (47.25 acres), Ultra Marines & Pigments Ltd. (19.10 acres) and SRP Tools Ltd (13.5 acres) were the initial firms that booked space at the first SIPCOT park.

THE MULLENWEG-WP ENGINE DISPUTE AND HOW WORDPRESS USERS ARE AFFECTED

Since September 21, a dispute between Matt Mullenweg, the technologist at the centre of the WordPress community, and a company called WP Engine has snowballed rapidly into a crisis for lakhs of WordPress users around the world. WordPress reputedly powers more than 40% of all websites on the internet, so policies that affect users' ability to access the software's features could have a wide-ranging impact.

WordPress and Mullenweg

WordPress is a piece of software people can use to build a website, blog or e-commerce portal on the internet. As open-source software, it's built, tested, deployed, and popularised by a community of thousands of volunteer developers located around the world. It is available under a GPL licence, which allows others to modify the software while obligating them to distribute the new version under the same licence.

A WordPress website can be self-hosted: you can download a copy of WordPress for free from WordPress.org to use for websites hosted on your own server. In the hosted version, you pay a fee to a third party to manage your website's WordPress setup and infrastructure. WP Engine is one such third party.

Matt Mullenweg is the founder and CEO of Automattic, a for-profit company that owns many digital products. One of them is WordPress.com, a hosted WordPress offering. Mullenweg also personally owns WordPress.org, which dispenses the open-source WordPress for download. This said, Automattic isn't directly affiliated with WordPress.org or the WordPress Foundation. It contributes nearly 3,988 hours per week towards WordPress development, however.

On September 21, Mullenweg accused WP Engine of being a "cancer" to the WordPress community. His ire was directed at WP Engine's decision to disable the ability of WordPress installed on sites it hosts to record changes made to content composed using the system. WP Engine's stated reason was that this feature led to bloated databases that eventually slowed websites. Mullenweg also alleged WP Engine was profiting from free access to WordPress without itself contributing to WordPress's development.

Mullenweg criticized WP Engine for disabling a feature that tracks changes on websites, claiming it undermines the WordPress experience. WP Engine responded by issuing a cease-and-desist letter, and Mullenweg retaliated by banning WP Engine from accessing essential WordPress updates and plug-ins, disrupting numerous websites.

The disagreement centres on WP Engine's use of "WP" in its branding, which Automattic (Mullenweg's company) claims violates WordPress's trademark. However, WP Engine argues that "WP" has been in use for over a decade without issue, citing previous WordPress Foundation policies that allowed its usage.

Mullenweg further argued that companies like WP Engine, which profit from WordPress, should contribute to its development. Tensions have arisen in the WordPress community, with some developers questioning Mullenweg's actions and whether his ban subverts WordPress's open-source principles.



Although access was temporarily restored, the future remains uncertain, especially as the WordPress Foundation moves to trademark terms like “Managed WordPress” and “Hosted WordPress,” leading to concerns among independent hosting providers about legal repercussions.

CLOSE CALL OVER ARABIAN SEA: QATAR AIRWAYS, EL AL PLANES COME WITHIN 1 MINUTE OF EACH OTHER

The incident occurred on March 24 at 35,000 feet over the Arabian Sea and the two aircraft came as close as 9.1 nautical miles, or around one minute of each other, even as the regulation separation for the area was 10 minutes.

India’s Aircraft Accident Investigation Bureau (AAIB) is investigating a serious incident of “airprox” or aircraft proximity — flights coming closer than the mandated minimum separation while airborne —in which two wide-body aircraft belonging to Qatar Airways and Israel’s EL AL were involved.

The incident occurred on March 24 at 35,000 feet over the Arabian Sea and the two aircraft came as close as 9.1 nautical miles, or around one minute of each other, even as the regulation separation for the area was 10 minutes.

The AAIB has released a preliminary report with details of the incident and the investigation process. The final investigation report is likely to be released within a couple of months, per sources in the know.

Airprox is a situation in which the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised. It is not clear yet whether the aircraft involved in this incident were on a collision course. Airprox incidents are classified into three categories—serious risk of collision, safety of the aircraft may have been compromised, and no risk of collision.

Although both the aircraft were not headed to or from India, the AAIB is conducting the investigation as the area where the incident occurred falls under the Mumbai Flight Information Regions (FIR) where air traffic services are managed by the Mumbai air traffic control (ATC). While the probe is underway, two air traffic controllers on duty at the time of the incident were off-rostered as per the protocol in such cases and sent for corrective training, per sources.

EL AL’s Boieng 777-200 aircraft was operating a scheduled flight from Israel to Thailand’s capital Bangkok, while the Qatar Airways Boeing 777-300ER aircraft was operating a flight from Doha to Male in the Maldives.

According to experts, the TCAS alerts are sounded only when two aircraft come in close proximity and there is a threat of collision. The fact that the alerts were not generated in either aircraft cockpit could possibly mean that while the planes did come too close for comfort, there was no risk of collision, a source said, but added that details will only be clear once the final probe report is out.

The AAIB has also received documents and data for the two flights from both the airlines, and these are being analysed as part of the probe.



LIFE & SCIENCE

STEADY BUT SLOW

In July, NASA cancelled its Volatiles Investigating Polar Exploration Rover (VIPER) mission to the moon after the development was beset by delays and costs had ballooned. By this time its engineers had fully assembled it and completed some tests, but NASA held its ground. The sudden decision dismayed scientists. VIPER was designed to map the distribution of water-ice in the moon's south pole region and the soils in which it occurred, over three months. In all, the golf-cart-sized rover was to be launched by a SpaceX Falcon Heavy rocket and deployed using Astrobotic's 'Griffin' lander, all managed through NASA's Commercial Lunar Payload Services programme. Landing on the moon is an expensive, time-consuming exercise. NASA's decision to cancel VIPER at this late stage thus drew the attention of the U.S. House Committee on Science, Space, and Technology and of the wider international community, which sees in VIPER's absence an opportunity for China's increasingly complex lunar programme to lead the way. The world's rush back to the moon offers potentially significant commercial and geopolitical gains. VIPER was expected to be a pivotal component of the US-led 'lunar axis' defined by the Artemis Accords, which counts India among its leaders. Yet, India missed a trick when, on September 18, the Union Cabinet approved a proposal by the Indian Space Research Organisation (ISRO) to begin the second phase of the country's lunar programme with Chandrayaan-4, a sample-return mission.

Moments after the Chandrayaan-3 lander descended on the moon's surface on August 23, 2023, reports erupted to claim India had yet again admitted itself into a small, elite group of countries that have achieved an autonomous lunar soft-landing. But such proclamations overlook the considerable gaps between these countries' space agencies from an operations perspective. One pertinent difference is that ISRO is unable to execute multiple flagship missions in parallel. Instead, it follows a 'one major mission at a time' cadence that, in exchange for maximising resource use efficiency, leaves the organisation incapable of manoeuvring rapidly to respond to new opportunities. Had it been able, ISRO could have sought the Cabinet's approval for the 'Lunar Polar Explorer' mission it is planning with its Japanese counterpart, to land a rover on the moon to perform many of the crucial tasks VIPER was expected to, especially prospecting for large water-ice deposits. Even now, the VIPER incident should remind the Centre that despite an expanding allocation and new funding modes in the offing, the Indian space programme needs more resources to realise its full potential.

HOW MARS' ATMOSPHERE WENT MISSING: NEW STUDY OFFERS CLUES

Mars today is a cold and barren desert, but this was not always the case. Increasingly, new evidence suggests that water flowed on the Martian surface once upon a time. This means that a thick atmosphere would have had to envelope the planet, to keep this water from freezing.

Then, some 3.5 billion years ago, the water dried up as the carbon dioxide-rich atmosphere dramatically thinned. Just why this happened is the central question for scientists seeking to understand the history of the Red Planet. A new study published in the journal *Science Advances* on September 24 might have some answers to this question.



Trapped in folds

Geologists Joshua Murray and Oliver Jagoutz from the Massachusetts Institute of Technology suggest that the water trickled through certain rock types on the Martian surface, and set off a slow chain of reactions that progressively drew carbon dioxide out of the planet's atmosphere and converted it into methane. Methane is a form of carbon that can theoretically be stored for aeons on the Red Planet's clay surface.

The two geologists formulated this theory based on their research on Earth. In 2023, they were working on a type of clay material known as smectite, which is known to be a highly effective carbon trap. Grains of smectite each comprise a number of folds, within which carbon can sit for billions of years. The MIT researchers found that if left exposed to the atmosphere on Earth, smectite can draw and store atmospheric carbon dioxide over millions of years, enough to cool down the planet.

Soon after this finding, Jagoutz happened to look at a magnified map of the Martian surface, and found the same smectite clay he was studying. Except, he was not sure how it got there. On Earth, smectite is a product of tectonic activity, but it is well-established that Mars does not see such activity.

Role of water

The two scientists thus began to research alternative ways in which smectite could have formed. The answer to this question lies in how Martian water reacted with olivine, a ferrous rock known to be abundant on the planet's surface. Using available data on the existence of olivine and the presence of water, as the existence of a thick CO₂-heavy atmosphere, the scientists came up with a computer model to simulate how the three would react with each other, over a billion years.

They found that in this vast time frame, oxygen atoms in water would slowly have bound to the iron in the olivine (this is also what gives the planet its red colour), freeing the hydrogen which would then have combined with the carbon dioxide to form methane. Over time, the reaction with water would lead the olivine to turn into smectite which, in turn, absorbed the methane.

This knowledge has utility beyond scientists and researchers. With humanity looking to send missions, and perhaps eventually colonise the Red Planet, methane trapped in the Martian surface can potentially be an invaluable resource. "This methane may even be used as an energy source on Mars in the future," the researchers suggest.

FRIGID PLANET OFFERS GLIMPSE OF EARTH'S FINAL FATE

The first rocky planet ever spotted orbiting a burnt-out star called a white dwarf offers a glimpse of what may be in store for the earth billions of years from now — showing it is possible our planet might survive the death of the Sun, albeit as a cold and desolate outpost in space.

The planet, with a mass about 1.9 times that of the earth, is orbiting the white dwarf about 4,200 lightyears away from our Solar System near the bulge at the centre of the Milky Way galaxy, according to a study using data from Hawaii-based telescopes.

The white dwarf began as an ordinary star, one or two times the mass of the Sun. Its current mass is about half the Sun's. Stars with a mass less than eight times the Sun's end their lives as a white dwarf, the most common type of stellar remnant.



Before its host star's death, the planet orbited at a distance, possibly placing it in the "habitable zone" — not too hot and not too cold — where liquid water could exist on the surface and perhaps support life. It originally orbited at about the same distance as the earth is from the sun. Following its star's demise, it is at 2.1 times that distance.

"It's currently a freezing world because the white dwarf, which is in fact smaller than the planet, is extremely faint compared to when it was a normal star," said University of California (UC), San Diego astronomer Keming Zhang, lead author of the study published on September 26 in the journal Nature Astronomy.

The Sun, roughly four and a half billion years old, is destined to become a white dwarf.

"At the end of our Sun's life, it will puff up to enormous size — astronomers call it a red giant — and gently blow off its outer layers in a wind," UC Berkeley astronomer and study co-author Jessica Lu said. "As our Sun loses mass, the planets' orbits will expand to larger sizes. Eventually, the sun loses all of its outer layers and leaves behind a hot, compact core. This is called a white dwarf."

Astronomers have debated whether the earth would be engulfed and destroyed when the Sun expands during its red giant phase, estimated to occur seven billion years from now. It will become a white dwarf a billion years after that.

Until now, only gas giant planets larger than Jupiter, our Solar System's biggest planet, had been spotted orbiting white dwarfs. The white dwarf is orbited by two bodies: the earth-like planet and, further out, a brown dwarf, an object bigger than a planet but smaller than a star.

As the sun ages and heats up, our solar system's habitable zone would move outward. The earth will remain habitable for less than about a billion more years from now, by which point its oceans likely will have evaporated, Zhang said.

WHAT IS SARCO, A SUICIDE POD UNDER LEGAL SCRUTINY IN SWITZERLAND AFTER US WOMAN'S DEATH

Switzerland police arrested at least four persons recently for their involvement in the death of a 64-year-old American woman by a 'suicide pod' on September 23. The woman, whose identity has not been disclosed, reportedly suffered from an autoimmune condition for years.

— Both euthanasia and assisted dying are ways in which a person may intentionally choose to end their life.

— Euthanasia relies on the presence of a physician to address a lethal drug to the person. Euthanasia may be of two kinds — voluntary, where the patient gives their explicit consent, and involuntary, when they are unable to do so, possibly because they are in a coma.

— Assisted dying, on the other hand, is understood to rely on self-administration of the lethal substance, with medical involvement restricted simply to the procurement of the drug. It means intentionally helping another person end their life, and does not stipulate that the person is terminally ill.

— Active euthanasia is banned in Switzerland. However, assisted dying and assisted suicide are legal as long as the person ends their life without any "external assistance" and those who help them do not have "any self-serving motive".



- The country's laws on assisted dying and assisted suicide have made it a preferred destination for "death tourism," wherein people come there to end their lives.
- According to critics, the Sarco Pod allegedly exploits a loophole in Swiss laws on euthanasia and assisted dying.

For Your Information:

- The Supreme Court had in 2018 legalised passive euthanasia, contingent upon the person having a "living will", or a written document that specifies the actions to be taken if the person is unable to make their own medical decisions in the future.
- The Supreme Court had allowed passive euthanasia while recognising the living wills of terminally-ill patients who could go into a permanent vegetative state and issued guidelines regulating the procedure.
- The Netherlands, Luxembourg, and Belgium allow both euthanasia and assisted suicide for anyone who faces "unbearable suffering" that has no chance of improvement.
- The United States has different laws in different states. Euthanasia is allowed in some states like Washington, Oregon, and Montana.
- The United Kingdom considers it illegal and equivalent to manslaughter.

HOW A NEARBY RIVER CONTRIBUTES TO THE RISE OF MT EVEREST, ACCORDING TO NEW STUDY

Mount Everest, currently 8,849 metres tall, has over the past 89,000 years, grown about 15 to 50 m higher than expected because a nearby river is eroding rock and soil at its base, helping push it upwards, according to a new study.

The loss of landmass in the Arun River basin, which spreads across Nepal and Tibet and is 75 km away from Everest, is causing the world's tallest peak to rise by up to 2 mm a year, the study said.

The study, 'Recent uplift of Chomolungma enhanced by river drainage piracy', was published in the journal *Nature Geoscience* on Monday (September 30).

While Everest and the rest of the Himalayas have been slowly rising due to the collision of the Indian and Eurasian plates for around 50 million years, the change in the Arun river network is a contributing factor to the mountains' continued rise.

'Isostatic rebound'

Everest has been experiencing an additional boost to its height due to a geological process called isostatic rebound. It involves the rise of land masses on the Earth's crust when the weight of the surface diminishes. The crust, Earth's outermost layer, essentially floats atop a mantle layer of hot, semi-liquid rock.

In the case of Everest and its neighbouring mountains, the surface weight started to reduce after the Arun River merged with the Kosi River around 89,000 years ago. This resulted in accelerated erosion that carried off huge amounts of rock and soil, reducing the weight of the region near Everest.



“Isostatic rebound can be likened to a floating object adjusting its position when weight is removed,” geoscientist Jin-Gen Dai of China University of Geosciences in Beijing, one of the authors of the study, told Reuters.

“When a heavy load, such as ice or eroded rock, is removed from the Earth’s crust, the land beneath slowly rises in response, much like a boat rising in water when cargo is unloaded,” Jin-Gen Dai said.

The main gorge of the merged river system is located approximately 45 km east of Everest.

The researchers, who used numerical models to simulate the evolution of the river system, estimated that isostatic rebound accounts for about 10% of Everest’s annual uplift rate.

Everest’s neighbouring peaks including Lhotse, the world’s fourth highest, and Makalu, the fifth highest, also get a boost from the same process.

More research required

Some experts, however, are not convinced by the new study’s findings. They have argued that the timing of the merger of the rivers is uncertain, and that the researchers have relied on assumptions.

Geologist Mike Searle, who was not involved in the research, told The Washington Post that “dating river deposits or incision rates is very difficult”.

“The main arguments are geographical,” Searle, a professor at Oxford, said. “River incision, in my opinion, has little to do with mountain uplift.”

SWALLOWTAIL BUTTERFLIES IN KEY ASSAM HABITAT FACE A CITRUS WORRY

The overexploitation of 25 species of host plants valued for their medicinal properties threatens the swallowtail butterflies in the forest habitats of a part of Assam often referred to as the “citrus belt of the world,” a new study has found.

The study, conducted in the Bodoland Territorial Region on the northern bank of the Brahmaputra River, also underscored illegal cattle farming within the protected areas, agriculture and tea cultivation near the habitats, illegal tree felling, and pesticide use to be among the crucial factors contributing to the decline in the number of these butterflies.

Kushal Choudhury of Bodoland University’s Department of Zoology is the author of the study, which was published in the *Journal of Threatened Taxa*.

“The decline of swallowtail butterflies in forest habitats, which was not a major concern about two decades ago, made the International Union for Conservation of Nature mark them as globally endangered,” he said.

India hosts 77 of the 573 swallowtail butterfly species recorded across the world so far. The International Union for Conservation of Nature designated the northeastern part of the country, where 69 species have been recorded, a “swallowtail-rich zone” under the Swallowtail Conservation Action Plan.

Dr. Choudhury’s study documented 4,267 individuals belonging to 35 species representing eight genera. Three are endemic to the region, while 12 enjoy federal protection.



“Butterflies are valuable indicators of the environment, whose health can influence their presence, abundance, and diversity. The findings suggest that the studied landscape [in the Bodoland Territorial region] is crucial in supporting larval host plants, adult resources of swallowtail butterflies, and other abiotic factors,” he said.

The Bodoland Territorial Region is a Sixth Schedule area covering 8,970 sq. km. About 40% of it is covered with forests, mostly toward the border in the north with Bhutan. The butterflies Dr. Choudhury studied in the region’s Manas Biosphere Reserve were found to count 25 plant species from six families as their essential food sources.

Plant problem

“Unfortunately, these host plants, valued for their traditional medicinal properties, are being overexploited,” Dr. Choudhury said, noting the absence of two rare species — the Bhutan glory (*Bhutanitis lidderdalii*) and the Kaiser-i-Hind (*Teinopalpus imperialis*) — during the survey.

The black-bodied swallowtails were observed to feed on six distinct plant families, including the *Rutaceae* or citrus. “The study area is situated in the citrus belt of the world and supports 52 varieties of 17 citrus species and six potential hybrid species,” he said, underscoring the link between the citrus plants and the *Papilio* genus of these butterflies for the development of their larvae.

According to the study, these citrus species are now confined mostly to home gardens or backyard settings instead of wild or semi-wild habitats because the coverage of forested lands has been shrinking and due to overexploitation. “This decline in the wild population of citrus species may be a possible reason for the disappearance of these butterfly species,” the paper read.

The extensive harvesting of three species of plants of the family *Aristolochiaceae* from the wild was found to have affected the density of the swallowtails belonging to the *Atrophaneura*, *Pachliopta*, and *Triodes* genera. These butterflies have a specialised diet and feed exclusively on plants from this family.

The exploitation of *Ligustrum cordatum*, a plant used in traditional medicine, has similarly affected the swallowtails of the genus *Lamproptera*. The scenario is no different for the butterflies of other genera, such as *Graphium*, which feed on plants of the *Lauraceae* and *Magnoliaceae* families.

“The lack of related host plant resources for these species raises concerns about their long-term survival and ecological well-being. Host plants are fundamental to the lifecycle of many species, playing an essential role in their reproduction and sustenance,” Dr. Choudhury said.

INBORN

Multiple behavioural studies have suggested that face selectivity might be an inborn brain feature. Both newborn human babies and newly hatched domestic chicks that have never seen faces before showing spontaneous attraction toward face-like stimuli composed of three dark features representing eyes and a mouth/beak. Researchers uncovered a population of neurons that respond to a face-like visual stimulus, which consisted of two eyes and a beak, in one-week-old chicks that were not previously exposed to faces. By recording single-cell neural responses to face-like stimuli in young face-naïve domestic chicks the researchers revealed a population of neurons selectively responding to a canonical face-like configuration, compared to alternative



configurations or isolated facial features. The findings suggest that face-responsive neurons in the brain of young chicks may be innate and emerge in young domestic chicks, and potentially other animals, without any previous face exposure.

POLLEN: A MAMMOTH KILLER?

WHAT IS IT?

Pollen is an important substance many plants use to reproduce. It is a gametophyte, a multicellular organism of sorts that delivers the male gamete of a seed-producing plant to the stigma of another such plant. Each pollen particle consists of reproductive and non-reproductive cells. When the pollen lands on a compatible plant, the non-reproductive cells produce the pollen tube while the reproductive cells multiply to produce the nuclei of sperm cells. The sperm travels through the tube to the base of the pistil, starting the process that eventually produces fruits filled with seeds. When many pollen particles are collected together, they resemble a powder. A natural polymer called sporopollenin surrounds the pollen cells to protect them during their journey through the air and from inclement elements. Many people are allergic to pollen — this pollen usually comes from anemophilous plants (including birch and hickory); an allergic reaction from grass pollen is called hay fever. The study of pollen is called palynology. A study published in the September 2024 issue of *Earth History and Biodiversity* reported that pollen may have played a part in pushing the mammoths to extinction. Based on genetic analyses, they said the emergence of plants towards the end of the last ice age could have disrupted the megafauna's sense of smell and signalling pathways based on their olfactory system, including locating their group-mates and food sources. However, independent researchers have asked for more proof of the idea before they say it can be accepted.

WHY YOU SHOULD CARE ABOUT SCIENTISTS MAPPING THE FRUIT FLY'S BRAIN

Scientists on Thursday (October 3) said they have successfully mapped the entire brain of an adult fruit fly, marking the first time that researchers have been able to create such a detailed survey of an adult animal. The neurological milestone is a step toward one day making a detailed map of the human brain that will help in understanding and probably treating mental health conditions such as Parkinson's and depression.

Nine papers, describing the research in detail, were published in the journal *Nature* on Wednesday (October 2). Hundreds of scientists and citizen scientists worldwide contributed to the work.

Sebastian Seung, one of the co-leaders of the research and a professor at Princeton University, told Reuters, "You might be asking why we should care about the brain of a fruit fly. My simple answer is that if we can truly understand how any brain functions, it's bound to tell us something about all brains."

How was the adult fruit fly brain mapped?

Scientists began mapping in 2013 by dunking the brain of an adult fly in a chemical bath, hardening it into a solid block, according to a report by *The New York Times*. "They shaved an exquisitely thin layer off the top of the block and used a microscope to take pictures of it," the report said.



Researchers then shaved another layer and took a new picture — in total, 7,050 sections were imaged and 21 million photos were taken to map the entire brain. The first high-resolution picture of the brain was produced more than a decade after the work kicked off.

What did the work reveal?

Scientists were able to detail more than 50 million connections between more than 139,000 neurons — brain nerve cells. They also classified the cells into 8,453 distinct types, making it the biggest catalogue of cell types in any brain, according to the NYT report.

These achievements gave numerous insights into the brains of fruit flies. Scientists analysed what different types of cells do, how the fly's eyes process motion and colour information, and discovered a large assemblage of "hub neurons" that may speed up information flow, a report by Reuters said.

Why is this significant?

The mapping of the fruit fly's brain can also give information about not just other animals but also humans. Although the human brain is far more complex than that of a fruit fly, the logic or "source code" at work when neurons communicate and interact with one another is similar, John Ngai, one of the co-leaders of the work, told The Washington Post.

Mala Murthy, another scientist who was involved with the research, told Reuters, "Flies are an important model system for neurosciences. Their brains solve many of the same problems we do."

The mapping has also raised the hope that someday scientists will be able to map the entire human brain as well. That is necessary to better understand how human brains work and how mental disorders come about. Scientists also hope it can help more philosophical questions — What is love? What are dreams?

WHY PSYCHEDELICS HOLD PROMISE FOR TREATING ANXIETY, DEPRESSION

PSYCHEDELICS, often linked with counterculture and spiritual experiences, come with risks of dependence and misuse. However, there is growing scientific evidence that these drugs may hold promise in treating anxiety and depression, offering new hope to patients who have struggled with traditional therapies.

But the big question is how these substances actually work in the brain. A new study led by India's top neuroscientist, Vidita A. Vaidya, may offer some answers. Conducted at the Tata Institute of Fundamental Research, Mumbai, in collaboration with researchers from Cornell, Yale, and Columbia, the findings were recently published in the prestigious journal *Neuron*. These results bring scientists one step closer to understanding how psychedelics could help ease anxiety, potentially paving the way for new treatments in mental health.

The researchers who conducted the animal study demonstrated a reduction in anxiety-like symptoms due to the complex interaction between the psychedelic drug, the receptors, and the specific neurons in a specific location of the brain.

How the drug works and challenges the team faced

Serotonin is a chemical messenger that transmits signals between nerve cells and influences mood, emotions, sleep, and appetite. Serotonergic psychedelics are a class of substances that



primarily affect the brain's serotonin system by acting on serotonin receptors—proteins that help transmit signals when serotonin binds to them. One of the most significant receptors is the 5-HT_{2A} receptor. Common examples of serotonergic psychedelics include LSD (lysergic acid diethylamide) and psilocybin, found in magic mushrooms.

In their research, the team used the serotonergic psychedelic 2,5-dimethoxy-4-iodoamphetamine (DOI), a substance commonly employed in medical research. The brain consists of interconnected regions, each responsible for specific functions, such as controlling emotions, memory, and thought processes. One critical area involved in emotional regulation is the ventral hippocampus (vHpc). This region contains various types of brain cells, including parvalbumin (PV)-positive interneurons, which help regulate signals related to anxiety and stress.

These cells have little locks on their surface — the 5-HT_{2A} receptors. When DOI was administered, the researchers found that it specifically targeted “fast-firing” PV-positive interneurons. The drug also unlocked these receptors, thereby boosting the activity of these PV-positive neurons, making them fire more rapidly. This sent calming signals to other parts of the brain, effectively quieting the overactive circuits associated with anxiety. The result was a reduction in anxiety-like symptoms due to the complex interaction between the drug, the receptors, and the specific neurons in the ventral hippocampus.

However, discovering the exact location in the brain, as well as the group of neurons within the location, took almost a decade. “When a drug is consumed, it travels throughout the body. Our goal was to pinpoint exactly where this psychedelic works. To illustrate this, let’s imagine the brain as a country. The brain is a complex structure, and after examining various regions, we discovered that it was the ventral hippocampus in this case. Identifying this region of the brain took us around three years because we had to deliver the drug to different areas of the brain to determine where it was working,” Vaidya explains.

The next step was to identify the exact location within the ventral hippocampus where the drug was working. “Once we knew the location in the brain, we had to determine which exact cells are firing—because there are millions of cells—it helps to know which neurons are being activated by the drug. The Cornell team collaborated with us in identifying that,” Vaidya says.

“Ultimately, we now precisely identified that population of neurons in a particular part of the brain where the drug works, specifically its ability to reduce anxiety. This took us five years. Once this discovery was made, we began experimenting with the receptors on the neurons, removing them, putting them back, and genetically manipulating them to see what effect this would have on anxiety. It was a team effort,” Vaidya says.

Why is this significant?

Vaidya highlights that the findings will aid in the future development of drugs for anxiety. “You don’t want all the effects of psychedelic drugs; you only want the reduction in anxiety, not the hallucinations. To be able to tease a specific pathway, you first need to understand how the drug works. Once you know the pathway, you can design drugs inspired by psychedelics that alleviate anxiety without producing psychedelic effects. This understanding has been one of the significant contributions of this study. It’s crucial because dissecting how these drugs function enables the development of more effective therapies for anxiety disorders,” Vaidya says.

Second, Vaidya emphasises that these findings will provide greater insights for clinical researchers studying psychedelics. “Clinical researchers working with humans who are taking the



active ingredient of magic mushrooms, which is a drug called psilocybin, can image the brain to see which parts are activated after a patient is given psilocybin. Our research has established a landmark, especially in examining the effects on anxiety. Without this research, you would be working in the dark, needing to explore the entire brain. However, this work directs you toward specific areas of interest in the human brain. But human studies are essential; it's a natural next step." Vaidya says.

Thirdly, Vaidya emphasises that the study's findings can assist researchers in targeting other brain receptors. "For instance, if we block the receptor in the area we identified, the drug's effect on anxiety disappears, but its other effects remain. It's like solving a puzzle—you now know which piece is responsible for one effect, while other pieces handle the rest. We've also discovered that hallucinations aren't generated in this part of the brain; they originate in a different circuit. While the exact circuit remains unclear, we're certain it's not in this region," Vaidya explains.

PIGS MAY BE TRANSMISSION ROUTE OF RAT HEPATITIS E TO HUMANS

New research suggests that pigs may function as a transmission vehicle for a strain of the hepatitis E virus (HEV) common in rats that has recently been found to infect humans. The Rocahepevirus rattistrain is called "rat HEV" because rats are the primary reservoir of the virus. Since the first human case was reported in a person with a suppressed immune system in Hong Kong in 2018, at least 20 total human cases have been reported, including in people with normal immune function.

People infected with rat HEV did not report exposure to rats, leaving the cause of infection undefined. The suspected cause during other human HEV infections, in many cases, is consumption of raw pork—making it a potential route for rat HEV as well.

Cloned virus

Researchers have found that a strain of rat HEV isolated from humans could infect pigs and was transmitted among co-housed animals in farm-like conditions.

Rats are common pests in swine barns—suggesting that the pork production industry may be a setting in which rat HEV could make its way to humans.

The study was published recently in *PNAS Nexus*. Hepatitis E is the leading cause of acute viral liver infection in humans worldwide, mostly in developing regions where sanitation is poor.

One strain linked to human disease is known as LCK-3110. The researchers used the viral genomic sequence to construct an infectious clone of LCK-3110. The team first showed the cloned virus could replicate in multiple types of human and mammal cell cultures and pigs.

Researchers then injected pigs with an infectious solution containing the LCK-3110 strain or another HEV strain present in pigs in the U.S., as well as saline as a control condition.

Viral particles in the blood and feces were detected one week later in both groups receiving HEV strains, but levels were higher in pigs infected with rat HEV.

Two weeks later, co-housed pigs that received no inoculations also began to shed rat HEV virus in their feces—an indication the virus had spread through the fecal-oral route.



SEX WORKERS FIND THEMSELVES AT THE CENTER OF CONGO'S MPOX OUTBREAK

Sex workers are among those hardest-hit by the mpox outbreak in Kamituga, where some 40,000 of them are estimated to reside — many single mothers driven by poverty to this mineral-rich commercial hub where gold miners comprise the majority of the clientele. Doctors estimate 80% of cases here have been contracted sexually, though the virus also spreads through other kinds of skin-to-skin contact.

Sex workers say the situation threatens their health and livelihoods. Health officials warn that more must be done to stem the spread — with a focus on sex workers — or mpox will creep deeper through eastern Congo and the region.

Mpox causes mostly mild symptoms such as fever and body aches, but serious cases can mean prominent, painful blisters on the face, hands, chest and genitals.

Kunguja and other sex workers insist that despite risks of reinfection or spreading the virus, they have no choice but to keep working. Sex work isn't illegal in Congo, though related activities such as solicitation are. Rights groups say possible legal consequences and fear of retribution — sex workers are subject to high rates of violence including rape and abuse — prevent women from seeking medical care. That can be especially detrimental during a public health emergency, according to experts.

Health officials in Kamituga are advocating for the government to shutter nightclubs and mines and compensate sex workers for lost business.

In Congo's province of South Kivu, the town of Kamituga has become the epicentre of the latest mpox outbreak as a new variant of the virus is infecting people faster and more easily than previous epidemics.

Miners stream into Kamituga by the tens of thousands. The economy is centred on the mines: Buyers line streets, traders travel to sell gold, small businesses and individuals provide food and lodging, and the sex industry flourishes. The industry is well organized, according to the Kenyan-based African Sex Workers Alliance, composed of sex worker-led groups. The alliance estimates that 13% of Kamituga's 300,000 residents are sex workers. The town has 18 sex-worker committees.

Disease experts say a lack of vaccines and information makes stemming the spread difficult. Some 250,000 vaccines have arrived in Congo, but it's unclear when any will get to Kamituga. Sex workers and miners are among those slated to receive them first.

Community leaders and aid groups are trying to teach sex workers about protecting themselves and their clients via awareness sessions where they discuss signs and symptoms. They also press condom use, which they say isn't widespread enough in the industry.

BREAST CANCER AWARENESS MONTH: THE PUBLIC HEALTH CASE FOR BRCA TESTING

Hereditary cancer occurs when an individual inherits a mutation in one of the many cancer-causing genes. These germline mutations increase susceptibility to many cancers of multiple organs. Among more than 300 different inherited cancer syndromes, HBOC is one of the most studied. Most HBOC cases are due to germline mutations in the BRCA1 and the BRCA2 genes (or just BRCA), but several other genes also contribute to the risk.



Inherited mutations cause individuals to be one step closer to cancer. Unlike sporadic cancers, which are responsible for 90% of cases with an average onset age of 60 years, HBOC cancers are relatively rare (accounting for less than 10% of cancer cases) but tend to develop earlier in life. This said, with one in nine Indians at risk of developing cancer in their lifetime and a population of 1.4 billion, a large number of individuals will carry hereditary mutations that increase their predisposition to cancer. Thus, hereditary cancers are an important public health problem in India.

Importance of BRCA testing

Women with BRCA mutations face a 69-72% risk of breast cancer and a 17-44% risk of ovarian cancer by age 80, compared to the general population's lifetime risks of 12% for breast cancer and 1% for ovarian cancer. Preventive interventions such as a prophylactic mastectomy can reduce breast cancer incidence by 90-100% and breast cancer-related deaths by 81-100%. Similarly, prophylactic oophorectomy reduces ovarian cancer risk by 69-100%.

Importantly, researchers have associated germline BRCA mutations with the risk of seven types of cancer — breast, ovarian, prostate, pancreatic, biliary tract, esophageal, and gastric cancers. Their research thus indicates a broader clinical relevance for BRCA genetic testing.

In India, breast cancer incidence is on the rise. It accounts for 27% of all cancer cases, making it the most prevalent cancer among women. BRCA pathogenic variants also cause about 26% of breast cancers and 21-25% of ovarian cancers in the country. In populations with a family history of cancer, BRCA mutations are found in 55% of ovarian cancer cases and 45-65% of hereditary breast cancer cases. Thus, the greatest potential of BRCA testing lies in cancer prevention in addition to its current common use for therapy of advanced cancers. Thus the key question for equitable breast cancer care is: why wait for cancer to develop when BRCA carriers and their at-risk family members can be identified early to prevent it?

Inequities in BRCA testing

Traditionally, BRCA testing has been offered to individuals based on their family history of cancer. This method misses about half of all actionable cases. Identifying someone with a hereditary mutation only after they develop cancer is a failure of cancer prevention. Following these traditional guidelines perpetuates health inequalities as fewer women at risk of breast cancer are identified.

With advances in next-generation DNA sequencing, genomics, and bioinformatics, large-scale population testing is now technologically feasible and has been implemented in some countries. Transitioning to population testing in India could be a complex but progressive step in preventing breast cancer, increasing BRCA testing uptake, and addressing the limitations of traditional testing models.

Two critical enablers for this approach are public education on the benefits of hereditary cancer risk and the cost of BRCA testing. The latter ranges from ₹15,000 to ₹30,000 in India. This price point may be affordable for higher-income individuals but isn't so for population-level screening. In high-income countries, population-based BRCA screening has proved useful in reducing breast and ovarian cancer incidence and is also considered cost-effective. But in India, despite the decreasing cost of DNA sequencing, the price of BRCA testing remains a barrier, which will exacerbate health inequities in breast cancer care. For any intervention to be sustainable, it must be both cost-effective and affordable.



Breast cancer is considered a public health priority because of its prevalence but also thanks to the availability of effective clinical interventions. Identifying, preventing, and treating hereditary cancer is crucial for public health. Still, the decisions following a positive BRCA result come with significant financial and emotional costs, rendering proper genetic counselling and consultation.

THE WAR ON SICKLE CELL DISEASE: HOW ONE HOSPITAL IS MAKING A DIFFERENCE

Sickle cell disease shortens life by at least twenty years. Slow-progressing organ failure is common in older patients, and acute chest syndrome, a form of lung injury, is a significant cause of death among the young. The symptoms vary among patients, leading to a wide range of complications

Chinchpada Hospital's initiatives

One of Chinchpada Hospital's most significant initiatives is that the hospital secured State Blood Transfusion Council (SBTC) cards for around 250 of the 350 sickle cell disease patients. These took two years to procure. The cards guarantee that patients will receive free blood transfusions across Maharashtra, a vital service that can be lifesaving for those suffering from severe anaemia.

Recognising that sickle cell disease patients are highly prone to infections like bacterial pneumonia, influenza, and meningitis, the hospital has also provided these patients free preventive vaccinations for all these diseases. This challenging but crucial task will prevent patients from developing life-threatening infections.

The hospital has subsidised the cost of hydroxyurea, a drug that reduces the defective haemoglobin entity (Hb S) and increases normal haemoglobin by using hospital funds and donations. Hydroxyurea is a drug that reduces the number of times a patient has worsening symptoms or life-threatening crises. It also minimises the need for blood transfusions. Subsidising this drug has significantly improved patient compliance, as patients can afford to take it for as long as their disease requires, increasing their quality of life. The government, too, should recognise hydroxyurea's benefits and make it cost-free.

The hospital works to enrol SCD patients in government disability schemes, ensuring they receive regular pensions and other essential benefits. With the help of donors and well-wishers, the hospital treats life-threatening infections and anaemia episodes at low costs or even writes off bills. They also provide free food to patients and their families, thus meeting their nutritional needs during treatment, especially during extended hospital stays. The hospital's experience in palliative care has been instrumental in providing effective pain relief and symptom management for SCD patients.

The hospital organises events like World Sickle Cell Day and sends personalised birthday cards to patients. These efforts help patients feel valued and supported, reinforcing the hospital's commitment to their well-being. On a community basis, the hospital conducts awareness programs in villages and schools to educate the community about SCD, its symptoms, and the importance of early diagnosis and treatment. Teachers, some of whom are patients of the disease, play a vital role in identifying children with symptoms and ensuring they receive appropriate care.

The hospital opposes policies promoting the diagnosis of sickle cell disease in a child during pregnancy, which might lead to abortions.

In conclusion, our experience from Chinchpada Hospital shows that our approach to tackling SCD must be comprehensive, addressing not just the medical aspects but also the socio-economic



factors perpetuating suffering. We must continue to fight for the lives of those suffering from SCD because every life is worth saving, and we can't afford to lose this battle.

STEM CELLS TO FIX T1 DIABETES? THE INDIAN PERSPECTIVE

Stem cell therapy is a cutting-edge development in regenerative medicine that holds the promise of a functional cure for Type 1 diabetes (T1D) by enabling the body to regenerate insulin-producing beta cells. A report of a woman with type 1 diabetes (T1D) in China who regained her insulin production made headlines recently. She received a transplantation of reprogrammed stem cells that reportedly "reversed" the disease. It marks a significant milestone in diabetes management. This is the first ever successful breakthrough in regenerating functional insulin-producing cells through stem cell therapy. There are other such trials that are still underway.

T1D is an autoimmune condition where the immune system attacks and destroys the insulin producing beta cells of the pancreas, resulting in diabetes. That means you are insulin-dependent to manage the ailment for life. For decades, managing T1D has relied on insulin therapy alone. In type 2 diabetes, the insulin that is produced by the body is either insufficient or ineffective, which is managed mostly by taking oral drugs.

Stem cell therapy in T1DM

The concept of stem cell therapy lies in regenerative medicine. Pluripotent stem cells that have the ability to transform into any cell type are pre-programmed into insulin-producing cells and transplanted into the human body. These pre-programmed cells will then start producing insulin and help regulate glucose. This is a potential game-changer in the treatment of T1D. Scientists have been making great strides in creating the cells that would mimic the pancreatic islets in functionality from different pluripotent stem cell sources.

The challenges

Although stem cell therapy does show positive outcomes in a controlled setting, there exist several challenges in achieving desired results in real-world practice. Firstly, the fact that it is an invasive procedure, and any invasive procedure carries risks. Also, newly-transplanted cells are prone to rejection by the body and will require long-term immune suppression that could cause infections and cancer. Even the encapsulation technology that protects the transplanted cells from immune rejection carries a risk in the long term.

The Indian perspective

In India, there are more than 8.6 lakh people living with T1D. The costs of healthcare for a person with T1D are far higher than for a person with the more common type 2 diabetes. The day-to-day life of a person with T1D can be challenging, considering total dependence on externally administered, multiple daily insulin injections. As it occurs very early in life, there is also a likelihood of early complications. In our country, where the demand and costs are high, treatments involving stem cells are far from reality.

If successful, stem cell therapy could essentially cure the disease. However, considering the cost and scalability; more time may be required to establish stem cell therapy as a routine treatment for T1D.